

SCHROEDER

The Investors Position
With Regard to
American Railroads

Commerce

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...THE INVESTOR'S POSITION...

WITH REGARD TO

A M E R I C A N

R A I L R O A D S.

by

C. WARD SCHROEDER.

Thesis for the degree of Bachelor of Arts in the School of
Commerce

in the
College of Literature and Arts
of the
University of Illinois

May 26, 1905.

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May 26 1903

THIS IS TO CERTIFY THAT THE THESIS PREPARED UNDER MY SUPERVISION BY

Charles Ward Schorster

ENTITLED

The Investor's Position with
regard to American Railroads

IS APPROVED BY ME AS FULFILLING THIS PART OF THE REQUIREMENTS FOR THE DEGREE

OF

Bachelor of Arts

Maurice H. Robinson

Professor of Geology & Transportation

HEAD OF DEPARTMENT OF

David Kinley

INTRODUCTION.

With our national prosperity of late vast amounts of capital are being annually produced. The recipients of this capital have a desire to expend or squander but a small part of it, and are constantly seeking for an opportunity to invest it in some way which will result in a benefit to themselves.

They might engage directly in business, but many have not the capacity to do this, and more have no such desire.

If they can find investment for their wealth so that it will afford a return sufficient for their needs and desires, they have no incentive to devote their lives in distasteful commercial careers. They are free to devote themselves to pleasure, to luxury, to aesthetic development of all kinds. If a man's activities result to his country's benefit from an increased social civilization from the development of a leisure class which raises the country from a sordid commercial standard to a higher civilization, he may be considered of as great importance to our welfare as is the commercial citizen. Many men have no thought for their life work but live for the pleasures and dissipations which a life of leisure coupled with a generous income affords. To satisfy this demand the corporation came into existence which allowed a perfect independence of capital and management.

With the rise of opportunities for investment, came securities offering various returns to investors and incurring upon him various risks. Securities came to be classified as

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the returns increased with the risks. But in recent years the rate of return has been steadily lessened. The man who could formerly obtain four percent from investment in government bonds can now get but two and a fourth percent. Meanwhile his expenditures have tended to become more extravagant as opportunities to expend have increased. Costly apartments, expensive clothing, and showy automobiles have come into vogue with his friends and he feels that he also must keep up with the faster pace.

With no increase in wealth and a lessening income his only remedy is to reinvest his money in securities offering a higher return. The supposition would be that he must also incur added risks. Actual facts do not substantiate this view for the great increase in commercial stability has reduced the risks attendant to certain securities so they now should be ^{be} classed far higher than previously.

As far as the public are concerned, general demand fixes the classification, but so wide is the general ignorance with regard to the real earning powers of securities that their classification varies widely from a true classification based upon the real risks and earnings. By careful investigation and study the investor may buy securities selling below their real value and thus refund his property. so that he will not incur any more risks than before; while his differential position acquired by study will afford him a higher rate of return than his fellow investors obtain, thus giving him a higher income which will offset the loss to him from a general decrease in the rates of interest.

Railroad securities have been in the van in this

movement toward stability; a study of their real earnings is especially open and profitable, and a greater differential ability can be acquired in this class of investments than any other. This thesis has been prepared to offer to the investor a systematic and thorough method of investigation and to aid him in the execution of his study. A capable investigation requires study and ability for the deduction of results from the legal, economic, accounting, and statistical material furnished. The legal study must succeed in exactly defining the security holder's position in regard to the railroads, both as to his rights and liabilities and results. Such results are entirely independent from results obtained from any other manner, and serve to define and afford practicability to those obtained from the other factors. Statistics of railroads are the grounds and facts upon which all deductions must be based. The laws regulating these statistics and the reasoning regarding their tendencies belong to the domain of economics; but a knowledge of the accounting systems of railroads is necessary for the application of these laws. The last three factors are interdependent and as such can not be considered separately. The logical method of presenting these results has been by taking them up in sequence as the principles of accounting dictate.

Railroad operations are so complex that economic laws regarding them have only been arrived at by considering the operations in their simplest state and gradually introducing influencing factors till actual practical conditions are arrived at. In other words laws have first been obtained for static conditions, then for dynamic.

As the work has been produced while pursuing regular courses of study at the University of Illinois, the reasoning is probably strongly colored by the opinions of my professors, Professor M. H. Robinson, Dean David Kinley, and Professor T. W. Hughes. For that reason the writer cannot claim to originality in any of the views expressed which are of any value, but simply to the fact that he has, to the best of his knowledge, been the first to attempt to combine all the component factors into one unified thesis.

...LEGAL POSITION OF A STOCKHOLDER...

Since every benefit that the stockholder acquires and every detriment to which he is liable must proceed through the medium of the law of the United States, we must first ascertain his legal position with its rights and liabilities.

The stocks may be acquired either by subscription or by transfer. The mere act of signing a subscription contract operates to make the investor a shareholder. Where, as is now usual with stock issues of such railways as the Pennsylvania and the New York Central, the method of taking stock is by application, allotment and notice, the notice is the essence of the contract and the contract dates from the mailing of the notice and is complete whether it reaches the allottee or not. The investor is then a member of the corporation regardless of whether he has received his certificate of stock or not. Indeed he may maintain an action in equity for its delivery to him. Once the subscription is signed, the investor is bound and cannot free himself unless he proves on the part of the corporation, "A false representation or wilful concealment of a material fact which was made with an intent to deceive."

Under ordinary conditions we readily see that this defense rarely lies. The facts in regard to railroads are printed in their reports. If these facts are false, the investor's contract is avoided but if true he is irrevocably bound. A careful study of the facts thus presented is then requisite to intelligent investment and more, we must be able to foretell the future of the

...LEGAL POSITION OF A STOCKHOLDER...

Under every contract the stockholder receives and

every contract to which he is liable must provide for the
return of the law of the United States, we must first ascertain
his legal position with the rights and liabilities.

The company may be required either to pay or to
return, the stock of which is a consideration of
property to make the investor a shareholder. There, he is now

bound with the issue of such rights as the Board of Directors
may have, the method of which is to be determined
by the Board of Directors, the notice to the holder of the shares

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road and the economic laws which govern this future.

By a complete transfer of shares, the purchasing investor steps into the shoes of the transferor and becomes a stockholder and is entitled as such to all the rights and privileges and is subject to all the liabilities of membership of which he has, or is presumed to have, notice in such a corporation. Ordinarily this transfer is made by filling out the printed form of assignment and power of attorney upon the back of the certificate. Once the purchaser is assured that his vendor has a right to the shares he sells, he need not worry concerning his right to sell for the owner of the shares has, as an incident of possession, the right to sell at will, and the managing officers and directors have no power to prohibit such free transfer. This rule of law does away with all fear that the stock may be tied up by a mutual agreement of the shareholders, as by means of a trust.

The requirement that the stock can only be transferred upon the books of the company is almost universal. But this provision is for the protection and benefit of the shareholder, for as between the immediate parties to the transaction, an ordinary assignment is effectual and will be recognized and enforced. The protection afforded to the corporation by such a regulation is this: they can be sure at any time who are entitled to the rights conferred, as dividends, rating at elections, etc., and who are subject to the liabilities imposed by membership in the corporation.

The authorities are in conflict over the question of the right to priority as between attaching creditors of the transferor and the holder of the unrecorded transfer of shares. The leading text writers are unanimous that the purchaser takes free from all

By a complete transfer of interest, the power of the
the stock into the hands of the transferee and becomes a stock-
holder and is entitled to such of the rights and privileges
and is subject to all the liabilities of membership of which it
is, as it respects to have, notice in such a corporation.
The stock transfer is made by filling out the transfer form of
the corporation and power of attorney upon the back of the certificate.
Once the corporation is satisfied that the transfer has a right to the
stock as valid, it need not worry concerning its right to sell
for the owner of the shares has, as an incident of ownership, the
right to sell at will, and the transferee obtains no dividend
until he has received such from the transferor. This rule of the
company with all that the stock may be the subject of a future
assignment of the shareholders, as by means of a trust.
The requirement that the stock can only be transferred
upon the books of the company is almost universal. But this does
not mean that the location and records of the shareholders, the
as between the transferee parties to the transaction, is universal.
The requirement is absolute and will be enforced and enforced.
Protection afforded to the corporation by such a regulation is this:
They are - those at any time who are entitled to the stock -
transfer, as dividends being at elections, etc., and who are en-
titled to the liabilities imposed by law upon the corporation.
The authorities are in conflict over the question of the
right to practice an action attaching creditors of the transferor
and the holder of the unrecorded transfer of shares. The leading
case is that the transferee is not liable for the debts of the

possibility of a prior right on the part of attaching creditors, for a creditor can only attach property of the debtor and the debtor has here no title to the stocks for he has assigned it. This view is upheld in the states of New York, New Jersey, Minnesota, North Dakota, Louisiana, Texas, Utah and Michigan, while a diametrically opposite view is taken by the courts in Iowa, Illinois, Indiana, Kansas, Maine, Colorado, Connecticut, Massachusetts and California. The investor then must take this risk or not according to the state in which he lives. The risk may be lessened and rendered almost nil by an immediate application for transfer.

There is no especial manner of making a transfer. A holder by gift who obtains by simply delivery and with words of absolute gift on the part of the donor holds a title that cannot be disturbed by any volunteer or by a donor.

A purchaser need have no fear as to whether duplicate shares of his stock are in existence, for a corporation does not need to issue new certificates until the old ones are surrendered and, if it does so, it is liable upon both outstanding certificates to innocent purchasers for value. The corporation itself is also liable if its officer should neglect to cancel and reissue the unauthorized old certificates. He does, however, run the risk of buying his stock from a thief or other person having no right to the certificates, in which case he acquires no title to the stock. But if the real owner of the stock is negligent or has enabled the assignor to occasion the loss he must sustain it. Even if he gains no title to the stock, he may recover from his vendor if the vendor is a responsible person. In actual business,

possibility of a error which in the case of attached conditions,
for a question can only arise in the case of the doctor and the
doctor has been no title to the stock in the case of the
this view is upheld in the case of New York, New Jersey, Illinois,
Ohio, North Carolina, Louisiana, Texas, Utah and Virginia, while a
unanimous majority view is taken by the court in Iowa, Illinois,
Nebraska, Indiana, Kansas, Maine, Minnesota, Missouri, Montana,
and California. The investor must take this risk of loss
according to the state in which he lives. The risk may be transferred
and transferred almost all by an assignment according to the law
of the state.

There is no special manner of making a transfer,
other than that which is given by the law of the state in which the
stock is held at the time of the transfer. A title will pass to the
transferee by any instrument or by a deed.

A transferee must have no test as to whether the
transfer of the stock was in absolute, but a corporation does not
need to know how the stock was transferred until the stock is transferred
and, if it does so, it is liable upon each outstanding certificate
after it transfers the stock. The corporation itself
is also liable if the officer should be liable to transfer the stock
the registered and certificated. It does, however, pay the
cost of paying the stock from a list of other persons having no
title to the stock, in which case the corporation is liable
in the stock. But if the real owner of the stock is paying
or has made the payment in advance the loss he must make it.
The stock is paid no title to the stock, he may recover from his
the stock is a transferee's action. In some jurisdictions.

most of the sales are made through brokers who are very loath to accept as customers non-responsible persons.

The corporation is liable for a sale in breach of a trust if it had notice that such trust existed. It is cognizant of course of all rating trusts and thus the investor is relieved of the risk of getting a title invalidated by the existence of such a trust.

Once having a good title to the shares, the investor assumes all the benefits and the liabilities of the same. including the liability on "calls" for the unpaid portion of his stock. He is able to foresee this liability when he purchases, for it is customary for certificates to state whether the shares are fully paid or not. If the corporation should refuse to register the shares, he may compel payment of damages by suit in law or specific performance by suit in equity.

...THE RIGHTS OF A SHAREHOLDER...

1. Participation in management.
2. Right to share pro rata in proceeds upon dissolution.
3. Right to inspect the records.
4. Preference in subscription for new shares.
5. Right to dividends.
6. Right to sue against A. Third persons.
B. Railroad.
including right to limit the power of the majority.

Stockholders do not, in American railroads, have the right of direct participation in the management. They do, however, have the power to elect in corporate meeting the board of

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The corporation is liable for a sum in excess of \$100,000 if it has notice that such limit existed. It is contended of course by all taxing trusts and that the taxpayer is relieved of the duty of paying a gift tax levied by the estate or by the trust.

[illegible]

...RELIGIOUS AND A TO OTHER MEN...

1. Partitions in management.
2. Staff to advise and help in decisions upon division.
3. Staff to inspect the records.
4. Personnel in subordinated for new divisions.
5. Staff to coordinate.
6. Staff to give advice and assist in decisions.
7. Staff to give advice and assist in decisions.
8. Staff to give advice and assist in decisions.

... have the power to effect in contracts with the Government.

directors who then supervise the management of the corporation, free from intervention on the part of the stockholders as long as they keep within the scope of their authority. Not even a petition of the majority of the stockholders will compel the directors to do an act contrary to their judgment.

The majority of the stockholders have also the power to make by-laws for their own government and for the conduct and the management of their own affairs. A purchaser of stock by his action in becoming a member impliedly assents to be ruled by all existing by-laws.

Powers which are extraordinary and which change the charter and by-laws cannot be exercised by the directors without express authority from the stockholders given by a unanimous vote.

These powers are of little value to the ordinary investor for almost all railroads here are either absolutely controlled or are dominated by some group of capitalists. Even if the investor bought enormous holdings, he would find it impossible to secure control.

Prominent failures in such attempts of late have been the attacks of the Harriman interests upon Illinois Central and upon Northern Pacific where the price of common was forced to 1050 and the recent concealed attacks upon Chicago and Northwestern. The control seems to be permanent and our study must be with this understood as a condition of investment. We must see whether the control is for the purpose of wrecking the road, as the old Gould Policy in Erie; of making it pay large dividends, as the management of New York, New Haven and Hartford; or of paying a moderate dividend and enhancing the value of the railroad

There is no doubt that the majority of the stockholders will control the direction of the company and the management of the corporation.

The majority of the shareholders have also the right to elect a director for their own Government and for the Council and the management of the company. A number of stockholders are also in possession of a number of shares in the company.

There were one or two other people in the room who were also interested in the subject.

The bridge at the northern entrance from Illinois Central and upon Southern Pacific where the grade of ground was raised in 1908 and the worst occurred during winter storms and rain.

The control seems to be somewhat and very much as with this watershed is a condition of treatment. The main watershed is for the purpose of avoiding the toll, the old canal policy is still being kept in mind.

on the movement of New York, New Haven and Hartford; it is

and a separate district - maintaining the value of the railroad

by charges against income for construction, as is the policy of Pennsylvania, Northwestern, and Atchison.

There are some distinct legal checks to prevent loss to the investor by this controlling body. If he has good grounds for believing that mismanagement exists which seriously affects his rights, he may demand to inspect, with his accountants, specified books of the corporation. Upon satisfying the Court he may compel such action by a writ of mandamus. The practical difficulties of this in the case of railroads make the remedy of little avail. Most mismanagement is secret. Usually only suspicions arise and more than this is necessary to secure the privilege. The cost of such examination would deter an ordinary investor for railroad accounting is so complex that a trustworthy report could scarcely be made for less than \$1000.

It is the duty of the corporation to protect the corporate rights but if the proper officers are unable or unwilling to act the members are permitted to sue for the protection of their interests. To maintain this action they must show that they will suffer irremediable loss, that a real effort has been made to induce the proper authorities to bring suit and that their refusal to act is a breach of trust or that the agents themselves are the authors of the wrong. Here he can introduce as evidence the findings from examination of the corporation accounts. He can then protect himself from loss resulting from gross mismanagement.

If the investor has purchased in good faith, he cannot be held for illegal acts of the corporation such as discriminating rates but he must repudiate promptly. If he has not acquired

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What are the implications of these findings for the future of the field?

to the University by this controlling body. It is not to be a

for the purpose of this study, the following criteria were used:

the article, in my opinion is incorrect - it is incorrect

1. Find bases of the subspaces. Under what hypothesis are the

the only control was action on a very high frequency

27. *Journal of the American Medical Association*, 1964; 191: 1000-1001.

[illegible]

...and more than 100 million people are now

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...could not identify the words for 'leaf' and 'stone'.

It is the duty of the corporation to protect the

complete rights but it is proper of course to withhold

to all the members are forwarded to him for his information.

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They will not be involved in any way.

and to make the report available to the public and the press.

anyone else who has been in contact with the person who was exposed to the disease.

the authors of "The

There is also evidence in

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• *Intermittent or chronic*

It is the investor's responsibility to ensure that the information is correct.

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in an ultra veris or illegal transaction and allowed the corporation to receive the benefits he may restrain the corporation by suit. In the same way he may enjoin the corporation from accepting a legislative amendment altering the charter. In short he has a right to see that the business in which he has invested after careful study of the risks and profits, shall not be metamorphosed into a different business with risks and profits of which he knows nothing.

When a corporation increases its capital stock, the members at the time of the vote to issue the new stock are entitled to the privilege of subscribing for the new stock in proportion to their respective shares of the old. They may sue ^{for} this option. This is to protect the stockholder from the watering of stock in such a way as to cause his relative share in the corporate property to become less. It also eliminates the power of certain parties to control the road without actually risking an amount of capital equal to the amount of money represented by the par value of the shares of the corporation.

Upon dissolution of the corporation, the stockholders have the right to share pro rata in the proceeds of the sale of the corporate property after all debts have been paid off. But a railroad is a peculiar kind of property. Its franchises and privileges are only valuable to the railroad and then only by user. The line and property are of such a character as to be available for use only by a railroad and embody such a great investment of capital that no private persons exist who have sufficient uninvested wealth to be able to bid a fair price for the property on sale by execution. No private corporations have as yet been

in an office where the legal transactions are carried out
action to transfer the property to the corporation by
trust. In the case of any other corporation the in-
vesting of individual investments affecting the property. It should
be one of the first things to be done in the corporation
after the study of the state and office, shall not be in-
corporated into a different business with state and property of
which it knows nothing.

Then a corporation is formed in the state, the
members of the state of the state to form the new state and anti-
tied to the existing or incorporated for the new state in propo-
tion to their respective shares of the old. They may also be
defined. This is to protect the stockholders from the existing
of which in such a way as to cause the existing state to be con-
sidered property to become law. It also eliminates the power
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a share of capital and to the amount of money transferred to
the state of the state of the corporation.

Upon dissolution of the corporation, the stockholders
have the right to share the state in the proceeds of the sale of
the corporate property after all debts have been paid off. But
a railroad is a business of property. The railroad is
valued as the only valuable to the railroad. The railroad is
the state and property are of such a character as to be available
for use only by a railroad and under such a great investment as
capital that no private person could have sufficient means
capital needed to be able to bid a fair price for the property
on sale by execution. No private corporation may be yet born

formed nor are they likely to be formed for the purpose of purchasing at such a sale. So railroads run on under mismanagement until the claims of creditors mount up so far as to exceed any sum that the railroad may hope to obtain by a realization.

The right to dividends is the most important that accrues to the stockholder. The sole purpose for which the investor risks his capital is the likelihood of returns in the form of dividends.

Dividends are that part of profits appropriated by corporate act to the use of and for the purpose of division among the stockholders. Once declared, they become the property of stockholders free from the claims of corporate creditors. The amount of this dividend rests in the discretion of the directors. They may retain as surpluses or reinvest in the road such parts of profit as may seem best to them. The maximum height of dividends is the amount of profits; i.e. that part of income which remains after paying every expense.

In the payment of dividends, the company is entitled to rely upon its register, and if it has no notice of the rights of any other person, it will be protected if it pays its dividends to the person in whose name the shares stand on its books. After, notice, however, of a transfer it must pay subsequent dividends to the transferee although actual transfer on its books has not as yet taken place. If the investor has not given notice to the corporation and the dividends are paid to his transferor, he may obtain them from him by action at law. Once declared they can be recovered by the stockholder in an action against the corporation.

formed the new share issue to be covered for the purpose of the
dividend at such a date. No dividend may be paid until the
entire amount of the dividend has been received and the sum to be paid
has been ascertained and the dividend is ready for payment.
The right to dividend is the most important right of
the shareholder. The sole purpose for which the
investor takes his capital in the likelihood of return in the form
of dividend.
Dividends are that part of profits appropriated by the
company out of the profits and for the purpose of division among
the shareholders. Once declared, they become the property of
the shareholders from the date of corporate declaration. The
amount of this dividend is the amount of the dividend.
The dividend is payable on the date of the dividend and the
dividend is the amount of profit; i.e., that part of the profit which
remains after paying every liability.
In the payment of dividends, the company is entitled
to pay upon the register, and if it has no notice of the rights
of any other person, it will be presumed to pay the dividend
to the person in whose name the shares stand on its books. After
notice, however, of a transfer it must pay subsequent dividends
to the transferee although actual transfer on its books has not
yet taken place. If the investor has not given notice to the
company and the dividend is paid to the transferee, the
investor is bound by action at law. Once declared, the
dividend is the property of the shareholder in an action against the company.

They may be paid in cash, property or in dividend stock but there can be no discrimination as between the stockholders either in amount, in the medium of payment, or in regard to stock not paid up in full. If the investor has pledged his stock, his pledgee will, if he has given notice to the corporation, collect the dividends. Once paid, the corporation cannot recover them even though they were paid illegally and come out of the capital of the company.

Every stockholder at the time when dividends are declared has a right to them without reference to the time when the profits out of which they were paid were earned.

The transfer of stock carries with it the right to all dividends declared after the transfer although earned before it but not the right to those declared before but paid subsequently to it. The transferor may assign with the stock the dividends already declared but to be paid in the future. Thus by the usage of the stock exchange, all transfers made before the books are closed are "dividend on" and all subsequent transfers "ex-dividend."

When an option is given to purchase shares within a given period and the sale is completed the transfer dates from the time of the agreement and the purchaser is entitled to all the dividends declared after that date. When in a will the testator provides that the income from certain shares of stock shall be paid during his life to one person and that upon his death the absolute property in the stock passes to another person, in case an extraordinary dividend is declared, the general American rule is that the final owner gets that part of it which was earned before the will was made.

There may be other factors, but the fact remains that the

But there can be no dissipation of the funds of the company, or in regard to stock
not sold up to this. If the investor has placed his stock, and
collected all, it is his duty to the corporation, collect
the dividends. When said, the corporation cannot recover from
any of them they were not illegally and none out of the capital
of the company.

Every stockholder at the time when the corporation was organized, and every stockholder at the time when the corporation was reorganized, is entitled to a right to the same amount of stock as the time when the corporation was first organized. The stockholders of the corporation are entitled to the same amount of stock as the time when the corporation was first organized.

of the trial exclusively, all transfers made before the books are signed are "void and can" and all subsequent transfers "not void."

then an option is given to purchase the same within a
given period and the sale is completed the transfer being from the
time of the agreement and the purchaser is entitled to all the
dividends declared after that date. When in a will the testator
declares that the income from certain shares of stock shall be
paid during his life to one person and that upon his death the
equitable property in the stock passes to another person, in case
an extraordinary dividend is declared, the General Assembly will
be not the final owner but that part of it which was received
before the will was made.

According to the usual rule in the United States, the stockholder is liable to the corporation simply to the extent that his share must be fully paid; that is, until the terms of the contract of subscription are fully performed. Many states, of late, have imposed additional burdens, by statutes, upon stockholders for the benefit of creditors. The state usually reserves the power to pass such acts by means of a special clause inserted in the charters granted. However, to avail himself of these acts the creditor must first establish the insolvency of the corporation and then proceed against the stockholder whose name appears as such upon the stock register. The costs and difficulties of this proceeding make the chances very slight that the investor will ever loose, because of this liability, more than the capital invested. He will be liable for the total indebtedness of the company if the purpose of incorporation was illegal and if there was not a good attempt to incorporate under a valid law. But if these conditions have been complied with, even though practically all the stock is held by one capitalist, the stockholder is liable solely as to the amount of his stock. If the stock is not fully paid "calls" for the balance may be made at any time according to the discretion of the directors.

The board have no right to declare dividends from capital and if they do the creditors may reserve the free dividend from the stockholder.

The liabilities imposed by statute are of three kinds: those which make the stockholders each personally liable for the full debts of the company, those which make him liable as a guarantor, and those which make him liable for an assessment imposed

According to the usual rule in the United States, the stockholder is liable to the corporation only to the extent that his name must be fully paid; that is, until the full value of the stock of subscription has been paid. Many states, of late, have imposed additional burdens, by statute, upon stockholders for the benefit of creditors. The state usually reserves the power to pass such laws by means of a special clause in the constitution or by amendment. However, to avoid himself of those not the creditor must first establish the insolvency of the corporation and then proceed against the stockholder whose name appears on which the stock is registered. The courts are divided as to this question, some holding that as long as the investor will pay down a portion of the liability he is not liable for the rest. It is the purpose of this legislation to limit and it is not a good defense to insist that the law is a valid law, but it does not seem to have been complied with, even though courts refuse all the stock is held by one individual, the stockholder is liable solely as to the amount of his stock. If the stock is not fully paid "value" for the balance may be made at any time according to the direction of the directors. The courts have no right to declare dividends from capital and it may be that the directors may reserve the funds from the stockholder. The liabilities imposed by statute are of three kinds: those which make the stockholders personally liable for the full value of the company, those which make the liability as a partner, and those which make the liability for an assessment imposed

pro rata upon the stockholders. The debts of an insolvent railroad are so large in proportion to the average holding of each investor that the first two classes are so distinctly unfair that they are never imposed with regard to railroads. None of the nine railroads considered in this investigation are liable to a pro rata apportionment of all unpaid creditors' claims, but the laws of some states impose a pro rata liability upon them in regard to special creditors, as those for wages. The most inefficient management easily avoids this liability by paying those debts first. Where the seller delivers the stock certificate and power of attorney to the buyer, relying upon the promise of the latter to have the necessary transfer made, he is held liable as a stockholder till he has done all he can to effect a transfer upon the stock register. For purpose of investment, the stockholder may regard his liability as equal to the price he pays for the stock but demanding as a recompense for a very slight risk of some extraordinary liability which may fall because of statutory enactments or because of dividends paid out of capital, a slightly greater return as interest than he would if this risk were eliminated as with government bonds. Such liability, however, is less likely to accrue than with any other kind of stock.

SPECULATIVE PROFITS OBTAINED BY INVESTORS.

Our study of American law as it affects the investor in American railroads has made clear to us that almost the only legal inducement for the purchase of stock is the likelihood of receiving dividends. The fact that almost all our railroads are controlled by groups of capitalists reduces to a minimum the benefit to be derived from the share in the management of the property.

All other rights are but safe-guards against fraudulent practices and but tend to diminish the risk of total or partial failure of dividends. The only liability of weight is the liability of loosing the capital invested through the insolvency of the company.

The economic aim of the investor is to discover the real value of the stock as compared with its market price. The market price represents the average investor's judgment of the stock's true value. Each purchaser is willing to buy a certain number of shares, the number he is willing to buy increasing as the price is lowered. Each seller is willing to sell a certain number of shares at each price offered, the number increasing as the price is raised. Our stock markets are so accessible to buyers and sellers that the price is practically fixed where the greatest number of shares can be sold. The average owner then believes that the stock is worth the market price to him or he would sell. The average buyer believes that the stock is not worth more to him or he would offer more. Sales are the actions of persons who are at variance from this belief. In a static state sales would bring about such a state of affairs that all owners of stock would believe them to be worth at least the market price and all potential purchasers would consider the stock worth not more than the market price; under actual dynamic conditions the owners and purchasers are perpetually altering their estimation of the stock's value and perpetual sales and fluctuations of stock occur.

If our investor is the first of the investing public to become seized with a general belief that a certain stock is worth

All other people are but well-informed investors and not so intelligent as to be able to judge of the value of the stock. The only difficulty is the difficulty of finding the correct average for the value of the stock.

The economic aim of the investor is to discover the real value of the stock as compared with the market price. The market price represents the average investor's judgment of the stock's true value. Each investor is willing to buy a certain number of shares, the number he is willing to buy increasing as the price is lowered. Each seller is willing to sell a certain number of shares at each price offered, the number increasing as the price is raised. The stock market has no tendency to move up and believe that the price is generally fixed when the greatest number of shares can be sold. The average order then believes that the stock is worth the market price to him or he will sell. The average buyer believes that the stock is not worth more to him or he would offer more. Since the number of persons who are at various prices is small, it is not possible to find about any one price or believe that all buyers of stock would believe that it is worth at least the market price and all potential purchasers would buy the stock worth not more than the market price; when actual demand comes from buyers and sellers are not actually affected in the estimation of the stock's value and market price and the stock of stock order.

If our investor is the first of the investing public to become raised with a company, he will not be able to

more than quoted, and if he acts upon this belief by purchasing, the increased willingness of subsequent buyers to pay more and the decreased willingness of owners to sell so low will cause a rise in price to such a height that he may sell at a profit.

The purpose of this exposition is to show how these combinations of events are brought about, how they may be foreseen, and how the investor may of his own volition take such a position that a part of the added cash value of the stock will accrue to him. Could these fluctuations in stock values be foretold by any one person with certainty, he might by repeated speculation increase his capital as often as the pre-ascertained fluctuation takes place, and to such an extent each time as his ability to judge the markets exceeds the average ability.

The fluctuation is caused by changes of the beliefs of sellers and buyers as to the true value of the stock, resulting in a willingness of each to sell or buy a different amount at a certain price than they had been willing to buy or sell previously. These changes may occur in two ways, by variation in the relative utility of a dollar's worth of capital, or by a change in the buyer's or seller's estimation of the utility of the stock to him.

The former depends upon the investor's ability to secure a greater or less return elsewhere. For the general average this ability is shown in current money rates both for long time loans and for sight drafts.

If he is in a position of financial stress, he must consider his stock worth more to him than he could save by selling and using the money, thus doing away with the necessity of borrowing his money at high sight rates, or, if he does not need the money, than he could obtain from the proceeds of the sale by loan-

more than doubled, and the only way that I could be understood
the increased willingness of shareholders to pay more and
the increased willingness of owners to sell so low with a view
that in order to reach a market that was well at a profit.
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of events are brought about, how they are brought about, and how the
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these conditions in stock values be brought about by any one person
with certainty, as they are brought about by speculation increases the
capital in the hands of the pre-selected individuals, and thus
not to such an extent with time as his ability to handle the market
exceeds the other ability.

The Commission is advised by the Bureau of the Census that the value of the stock, including in a statement of value, is not to be determined by the value of the stock, but by the value of the stock as determined by the market.

The Government has been the inventor's ally to the
 extent of a certain degree of freedom. For the general
 public the ally is shown in almost every case to be
 the Government and for that reason.

It is in a position of financial straits, he said, and after the stock market boom to which he would have to return and before the money, this latter may still be necessary to borrow the his money at that time, or, if he does not need the money, then he will have to be prepared to pay for it.

ing at current sight rates.

The same reasoning applies with regard to time loan rates. Usually the distressed financier must consider sight rates for that is ordinarily his only means of obtaining ready money, while the financier in no particular danger wishes to avoid the bother and risk consequent on short time loans and considers only the return he might receive for long time investment. Changes of this nature are brought about by alternate seasons of acute depression and inflated prosperity. As time advances the commercial world is becoming more and more stable and the fluctuations because of this element therefore tend to lessen. Facts that illustrate this tendency are the adoption of sound money, the greater stability of banking institutions and the growth of their policy to aid one another by loans, the decrease of wild speculation because of the more careful investigation now exercised by capitalists before investment, et cetera.

The change with regard to the investor's estimation of the utility of the stock to him occurs as his opinion in regard to the earning power of the company varies. This is altered as he attempts to predict the effect which general conditions will have upon his particular road, or as his knowledge in regard to the actual worth of his road increases. Thus, industrial inflation or depression will cause variation in the traffic handled by the companies and so in its gross earnings, while a corresponding variation will occur in the elements entering into cost of service and the size of the annual agricultural productions will cause traffic to vary, et cetera. We have seen how industrialism tends to stability; variations in agricultural productions tend in the

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The same operation will be carried out in the same way. Usually the difference between the two rates for the same period is only a few points. But in the case of a certain period, when the difference is as high as 100 points, the position and the operation of the market are completely different. In such a case, the market is not only a matter of the rate of interest, but also of the rate of exchange. As the exchange rate is not fixed, it is possible to make a profit by buying and selling the currency of the country in question. This is the case of the market for the currency of the country in question. The market for the currency of the country in question is not only a matter of the rate of interest, but also of the rate of exchange. As the exchange rate is not fixed, it is possible to make a profit by buying and selling the currency of the country in question. This is the case of the market for the currency of the country in question.

The change with respect to the inventor's obligation as
the holder of the stock to the owner of his opinion in regard to
the amount paid by the company varies. This is shown on the
statement to provide the effect upon the obligations which have
upon the particular road, or on the proceeds in regard to the no-
tional work of the road themselves. Thus, industrial production on
generation will cause variation in the results caused by the con-
struction and so in the gross receipts. While it is understood that
action will occur in the network without any cost of service
and the rate of the normal commercial production will remain
fixed to that of others. We have seen how industrial lands

so stability; variations in industrial production tend to the

same direction but less noticeably because the greater part of variation is due to physical agencies, such as, heat, winds, and amount of rain. But those elements of production which are at all under artificial control are being rendered more stable.

Fertilization is making the soil of uniform fertility, complete irrigation systems are preventing drouth and technical knowledge disseminated at our agricultural colleges is enabling the farmer to produce better and large crops.

Knowledge in regard to railroads increases with opportunity in the shape of better reports published by the railroads, Inter-State Commerce Committee reports, new books on the various phases of railroads, and more numerous railroad journals. As the general intelligence of the country has advanced, the public has been able to understand more about the subject and more men have been lead to make a specialty of this kind of study.

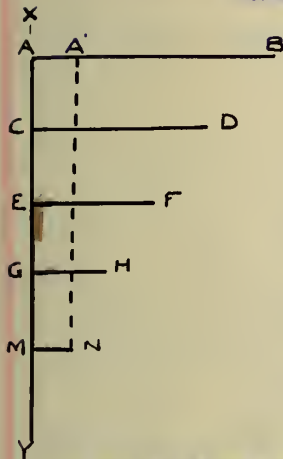
We find then a general tendency on the part of fluctuation to lessen and, as general stability increases, speculative changes will be of longer duration and so the investor will need to hold the securities much longer in order to profit from fluctuation.

How about his deferential ability to judge the trend of fluctuation? That too tends to diminish. As the investing public become more conversant with the true worth of the property some will advance a step farther in reasoning. Having studied one of the causes of fluctuation, they gradually come to realize that they are causes and as such must produce effects. They will perceive the profit to be realized by forstalling those effects, which, of course, are in this case fluctuations in price. Finally a few are found to possess enough of the true spirit of the

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entrepreneur to risk their money in order to gain the profit. By this act they enter the market as buyers, cause an increased demand for the stock and force up the price to such a point that more sales can take place. At each step the less venturesome, thorough or intelligent of these new students fall away, so that comparatively few ever attain the ranks of the speculator.

Graphically this process may be illustrated as follows:



Our investor occupying the position A'B' enjoys a differential position equal to the distance B is from XY; XY representing the average investing ability of the country. As a few of the general public gain real investing ability and more what might be termed a desultory ability, a greater tendency

to anticipate the trend of real value and just as great a disinclination to be deflected from this trend becomes noticeable on the stock exchange. In reality they are encroaching upon the field of the ideal speculator. The speculator produces nothing but simply profits by the mistakes of others. The public are reducing the number and amount of their mistakes and less is left for the speculator to prey upon. The amount of this reduction may be represented by MN. Then our investor's differential position is reduced to A'B. In the meantime the few students who have reached the ranks of speculators appear and take positions of various differential advantage, represented by CD, EF, and GH. Thus, they enter and compete in the differential field of our investor. They do this by judicious buying and selling of stock in the open market thus increasing the tendency of market prices to represent real value which once attained causes an elision

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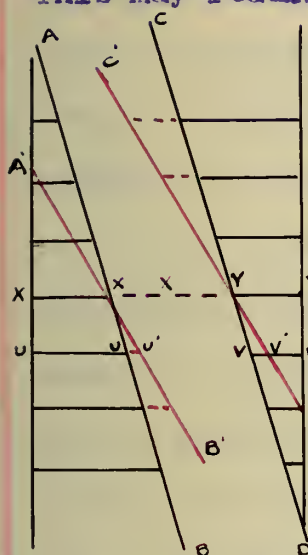
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of speculators. The general public XY advance still further leaving the differential line of our investor still further encroached upon.

As the general knowledge approaches the real value of the securities, the fluctuations caused by the attempts of the public to fix an economic price decreases in extent.

This may readily be shown graphically:



Let X be the price at which the greatest amount of shares can be transferred and AB and CD be the tendency of the quantities offered at a successive series of prices. As investors acquire a better knowledge of the real value of the stock they become more willing to offer more shares in proportion at each increased increment in price and less at each decreased increment. Thus the lines AB and

CD take the more divergent positions AB' and CD'. Now fluctuation is caused by the attempt to find the position where the most shares will change hands. That is, the place where XX and YY will approximate each other in length. As the deflection of AB and CD is increased, the ease with which this can be found increases. For it is evident to all that the fact that UU' is greater than VV' is more apparent than UU is greater than VV.

Now instead of considering the profit accruing to the speculator from an average and therefore unreal speculation, let us consider his profits as they are actually secured. In the first place the amount of profit varies greatly with different speculations. The frequency of fluctuation depends upon causes

of specialists. The central subject of research - the
lawyer and the relationship of the lawyer to the
public.

This paper will be shown graphically:
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over which he has no control but simply may profit by superior judgment. He cannot perfect this judgment to such an extent that he will foresee and give exactly the correct weight to these causes. He cannot exactly judge of the course of the money market nor buyers' and sellers' estimation of the stock utility. The latter he can and does influence to a great extent by manipulation. He may do this by aiding, usually indirectly, the public to form their estimation of the stock and the probable course of the market price. This he may do by the spread of false information concerning the company and by exaggerating the effects to be caused by outside phenomena. Each component member of the public is psychologically inclined to believe that the crowd knows more about the stock than he does and to fall in with and follow the course indicated. The speculator then endeavors to so clothe his actions that they are superficially understood to be those of the investing public and then to withdraw and profit by the mistakes that the real investors make.

His policy is to influence the public in a false direction. If they tended in the right direction, his profit would be measured by the benefits he might secure from being one of the first to perceive the tendency. But by directing them falsely, he may profit by the further deviation from the correct value and when the reaction toward real value occurs the market price is just so much further from the real price, the variation in price reaching real price is greater and his differential profit in taking the lead will be more. Thus, if R equals real value and P the market price, by manipulation he may deflect the price to P' . Then he may profit from

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from the deviation of PP' and from the greater reaction $P'R$. Besides in this manipulation he is, as is termed, inside the market. His competing speculators must judge the real deviation PR , and can have no expectation nor knowledge concerning the deviation PP' . This knowledge is a clear gain to his differential position. Thus if his previous differential advantage equals DP , by manipulation it becomes DP' and a much greater profit is thus secured. If our investor is not on the "inside", his differential position is lowered in proportion as the manipulator's is raised.

But our investor may then impair the effect of the manipulation and so obtain a greater profit. Part of the manipulative change in price is due to the manipulator's manifesting an increased demand for the stock on the side opposite to which the true value of the stock will justify. Our investor foreseeing the inevitable trend of the stock may buy or sell stock to sell when the price finally approaches closer to the real price. Thus in the ordinary course of events the manipulator must assume holdings at P contrary to his judgments dictates and must continue to assume them from P to P' until the public is deceived and takes up, the causation of this demand of its own accord, when the manipulator changes to the other side of the market and reaps a profit from P' to R at the expense of the public. While he is on the wrong side of the market from P to P' our investor may enter the right side. Then the manipulator's demand instead of making a rise in price will result simply in a greater number of shares being transferred at the old price. When the public then enters

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the market believing that the value of the stock is closer to the real value, the demand will force the price closer to P (real value). Our investor has then secured a place in the van of the movement. He has been able to secure far more extensive holdings at P than he otherwise could without causing a reaction of price toward R. His profits upon realization will, of course, be far greater than if the manipulator had not entered the market. As the number and quality of speculators increase, more will be found who are willing to take this determined stand against manipulation and, as a consequence, manipulation will be found to have less and less frequency of occurrence.

The question is now, do profits to be obtained from speculation tend to diminish just because the possible profits tend to diminish? The net profits of a speculator from a long series of speculations are of more importance to him than those from a single speculation.

The element of risk enters; ^{as also does} the chance of a mistaken judgment which instead of putting the investor in the van of price change will place him in the rear guard. Under purely static conditions the speculator with a differential advantage is about as likely as not to choose the right side of the market; his risk is about 100 %. For a given number of buyers offer to buy increasing amounts at certain prices; a given number of sellers offer to sell increasing amounts at corresponding prices; and the price is fixed where the greatest number of sales can take place. As the number of buyers is more or less than the number of sellers so will the price rise or drop. Profit then is determined solely by whether the speculator is on the side of the majority.

The present belief is that the value of the stock is about 100
and that the company will have a value of 100 (100)
value). The company has just secured a place in the line of the
movement. The company is to secure the most extensive and
large of 2 lines of operation which would require a transfer of
order for 100. The order is now being made all, of course,
as far as the 100 is concerned. The order is not being made
yet. The number and quality of the operation is now being
and the company is willing to take this operation as a whole
operation and, as a consequence, the company will be able to
have the best and the best of the operation.

The question is now, do people in the company want
to be able to do this? Just because the company is now
and to do this. The company is now a company from a long
time of operation and it is now important to the company
from a long operation.

The amount of the stock is now the amount of the stock
which is now being of the stock in the company. The
company will also be in the company. The company is now
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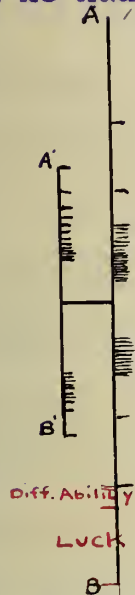
Under actual conditions the speculator possessing a differential ability is enabled to place himself more often on the side of the majority and so his risk tends to decrease from 100% to the limit zero. For the ability of the speculator to invest on the right side of the market does not depend upon his differential ability but upon his real ability to judge the markets. All the factors which result in lowering the profit which may be gained from a single transaction either increase this ability or remove existing checks to its free operation. All the educational facilities which the general public utilize, he may utilize; all the increased veracity of published railroads conditions, he may become conversant with; all the beneficial increase in railroad stability and the better management of railroads will become known to him and will be incorporated into a better resultant judgment.

The tendency toward industrial and agricultural stability and the gradual elimination of manipulation remove factors of price change over which he previously had no means of allowing exactly for and which make his judgment truer. But does risk fall as fast as profits from a single speculation? We have seen how the elements of fall of risk are the same as those of the fall of profit. The ultimate results of speculation in either case must be to produce a price varying only as the worth of the security warrants it. Before, where the price varied greatly and the risks were great, the profits and losses had a similar fluctuation. Now with less variance of prices and smaller risks, the profits and losses are within a smaller scope. Thus, leaving the previous scope to be represented by AB and the present by A'B' and allowing the number of speculators to remain constant,

It is a well-known fact that the medical profession has been the subject of much criticism and attack in recent years. This is due to many causes, but one of the most important is the fact that the public has become more educated and more critical than in the past. They are no longer willing to accept the word of the doctor without question. They want to know the reasons for his actions and the results of his treatment. This has led to a demand for more information and a more active participation in the medical process. The doctor must now be able to explain his actions in a way that the patient can understand. He must be able to show that his treatment is based on sound scientific principles and that it is the best possible for the patient's condition. This is a great responsibility, and it is one that the medical profession must take seriously. It is not enough to simply prescribe a treatment and hope for the best. The doctor must be able to justify his actions to the patient and to the public. This is the only way to maintain the trust and confidence of the patient and to ensure the best possible results for his treatment.

The medical profession has a long and noble history. It has been the source of much knowledge and skill, and it has saved many lives. But it is not perfect. It has its weaknesses and its faults. It is a profession that is constantly evolving and changing. It is a profession that is always learning and always improving. It is a profession that is always striving for the best possible results for its patients. This is the only way to maintain the trust and confidence of the patient and to ensure the best possible results for his treatment. The medical profession must always be open to criticism and to attack. It must always be willing to listen to the suggestions and criticisms of the public. It must always be willing to accept the responsibility for its actions and to make the necessary changes to improve its performance. This is the only way to ensure the best possible results for its patients and to maintain the trust and confidence of the public.

it is apparent that much greater profits resulted under the previous system to the speculator possessing the greatest differential ability combined with luck i.e. the tendency of those elements over which he had no control to cause their reaction in his favor.



The difference between the widest gradations in both AB and A'B' represents then the differential profit possessed over all others by the speculator having the greatest differential ability and luck combined. We have seen how the element luck tends to become eliminated but even if we assign arbitrarily a portion of the last gradation in AB to luck the residual portion will still exceed the last gradation of A'B'. We may then state that the

profits of speculation as a whole tend to remain constant while the profits of the differential speculator tend to diminish.

...ANALYSIS OF THE INVESTMENT...

The real economic value of the stock may be said to depend upon the return both present and future per dollar invested. This value is complex in structure and its composition may be scientifically studied as made up in the following way:



There is a certain amount of wealth existent in the United States which is furnishing a supply satisfying the demand made by the needs for capital of various producing units and the needs of various public corporations. The amount of this wealth cannot, of course, be stated but its enormous increase as a portion of our total wealth may be noted. Within the thirty years of 1870 to 1900 it has increased over 400%.

It is important to note that the Commission's report is not a final decision. It is a recommendation to the President, who has the final authority to grant or deny the application. The Commission's report is based on the information provided by the applicant and the results of the investigation. It is the Commission's duty to ensure that the applicant is qualified and that the proposed work is in the national interest. The Commission's report is a key document in the process of granting a security clearance. It is a recommendation to the President, who has the final authority to grant or deny the application. The Commission's report is based on the information provided by the applicant and the results of the investigation. It is the Commission's duty to ensure that the applicant is qualified and that the proposed work is in the national interest. The Commission's report is a key document in the process of granting a security clearance.

The difference between the above two cases is that in the first case the difference is not only in the direction of the force but also in the magnitude of the force. In the second case the difference is only in the direction of the force.

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This is shown by the gauge of investments in our manufacturing industries which, with railroads, have absorbed the greater part of this added wealth. Where in 1870 they represented an investment of but two billions, in 1900 they were valued at over nine billions. The low money rates of 1893 were partly caused by the inability of entrepreneurs to utilize this great wealth.

The public corporations and governments took advantage of this to refund their indebtedness. In support of this, we note, in 1897, bond conversions by England, Russia, Germany and France. Previous to 1899, money rates in the United States were higher than those of the rest of the world. As a result the United States has been a very advantageous place for the funding of foreign surplus capital. Since then we have entered the world's money market. It has become a matter of indifference to us whether we invest in home industries or abroad. In 1899 bonds of foreign countries to the extent of over eighty millions were placed with the United States. With this great increase of capital, new wants were developed and promoters found means of using it in 1899 to float the new securities of huge industrial corporations. Railroads found that they could utilize the wealth at existing rates and increased their capitalization. Public corporations make a different kind of demand. They do not expand their loans as rates induce them but arbitrarily as their needs require.

Money rates differ as the element of stability, length of investment and risk enter. But we may consider that the dividends actually paid by our companies will induce owners of this wealth to purchase the stock of our railroads at a certain price, which we may represent by the parallelogram ABCD. But

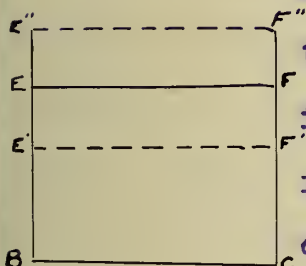
that is, the power of investigation is not limited to
the investigation which, with reference to the present
of this subject matter. There is 1870 they succeeded in having
went of but two million, in 1890 they were raised to over nine
million. The two million of 1870 were really caused by the
inflation of the currency to suit the great war.
The investigation and government took place
of this to which their industries. In support of this, we note
in 1897, and 1898, by Germany, Austria, Germany and France.
Germany to have. In the United States was about
that stage of the war. In a similar manner
which had been a very important class of the United of 1870
which was not original. It was then we have entered the world
which was not. It has become a matter of fact, however, to the
which is found in some industries or others. In 1890, however, it
which countries to the extent of over thirty million were found
with the United States. With this great increase of money, we
which were caused and produced found about of which it is found
to find the new acquisition of some industrial enterprises.
which found that they could utilize the wealth of capital
which was produced and produced. Public ownership
which is not a kind of demand. They do not regard their labor
we have found them not especially as their needs require.
which was not a kind of demand. They do not regard their labor
of investigation and that which. But we are not to find the
which is actually found in some industries with the same degree of
this which is found in the field of our industries at a certain
which is found in the field of our industries at a certain

railroads differ in respect to the inducements they offer to the investing public. In some the investor risks the loss of his capital because of possible insolvency of the company more than in others. Some roads are liable to fail wholly or partially in the payment of their dividends; perhaps, through the reservation of a larger portion of net earnings for surpluses and funds, perhaps because of the lessened net earnings. As the investor demands the capitalization of this greater or less risk than the average railroad, ABCD varies in respect to specific railroads and may become fixed at AB'C'D' or AB"C"D as the case may be.

But the likelihood of a future increase of dividends must be capitalized. However difficult of ascertainment this increase may be it is real and, as a thing of potential value, must enter into the price of the stock. Similarly as with actual dividends the average likelihood of increase may be represented by a parallelogram BEFC. With regard to specific railroads this like-

lihood capitalized will increase or decrease BEFC to BE'F'C or BE"F"C. This potential element of investment is the hardest of all to ascertain for into it enters such psychical factors as the policy of the road; the confidence that the management

have in its continued earning power; such ulterior factors as crop conditions, industrial depressions, increase in costs, government interventions in rates and growth of subsidiary territory, and such technical factors as the question regarding a true presentment of actual conditions, the liability of the efficiency of the management to vary. We may then allow the various effects of the factors entering to produce a certain addition



[illegible]

to the real value of the investment. Adding this to our previous value of $AB'C'D$ or $AB''C''D$ we have the total real value represented by $AE'F'D$ or $AEFD$.

Under actual conditions we find investors purchasing as their judgment directs that the market price is above or below the real value of the road. As the general public comes to appreciate the distance that market price is from real price they offer to buy or sell greater or fewer shares of stock at graduated prices than they had previously been willing to buy or sell, and this causes a new determination of the point at which the greatest number of sales may take place, a variation in price approaching the limit real value.

Under static conditions investors would come to realize and recognize a deviation from real value and would cause such a change in demand and supply as to adjust the price finally at real value.

But under dynamic conditions, i.e. conditions as they actually exist, price though it tends toward real value never reaches it. Real value is so difficult to ascertain that, at any one time, it may be safely said that no one can judge it. The investor's estimation of it simply varies as his ability to discover and weigh the elements entering into its composition. He is limited in regard to time in forming this judgment for the elements to be considered are continually changing and as they change the value of the property changes. How may he profit? We have explained that price is the average investor's estimate of real value. Then any investor enjoying the possession of a differential judgment over the public may purchase a stock for less than

to the total value of the investment. . . .

Under actual conditions we find investors purchasing
on their judgment expects that the market price is above or below
the real value of the bond. As the general public comes to know
these conditions that market price is from real value they expect
to buy or sell bonds at lower prices or at a profit of anticipated values
than they had previously expected to buy or sell, and this
causes a new determination of the market price of bonds. The greater
number of sales now takes place at a price above the
real value.

Under static conditions, a variation in the value of the price level would cause a variation in the value of the price level. This is because the value of the price level is determined by the value of the price level. Therefore, a variation in the value of the price level would cause a variation in the value of the price level.

But under certain conditions, i. e. conditions of the
actual estate, prices should be based on the value of the
land as it is. It is not difficult to ascertain that, at
any one time, it is not really said that no one can have it.
Therefore, estimation of its actual value is the object of the
law, and with the elements of the composition. It
is limited in regard to time in terms of the judgment for the law.
It is considered as continually changing and as being subject
to the value of the property. How long it lasts? It lasts
until it is said to be the average of the estate of the
land. Then the law is subject to the possession of a different
estate. It is subject to the estate of the law for the law.

its real value to the long time holder. The speculator- has a differential knowledge of the trend of the market price in so far as the real value effects price.

...THE REAL CONDITION OF AMERICAN RAILROADS...

The capitalization of a railroad represents the actual cost of construction plus the watered stock which the road has subsequently been forced to support.

Early American roads were very poorly constructed for the country could not afford to tie-up a great amount of its capital in the road, the traffic had to be developed from almost nothing and the success of the roads was not assured but a matter of a purely experimental nature. An increased investment in cost of road was required and made whenever the density of track justified it. This was found by applying the formula $I/I_0 A + XT$, in which A represents the cost of road and I/I_0 the cost of maintenance and of interest charges for investment and XT equals the product of the ton miles and the cost of carrying one ton one mile. In practical application the investment in the road has been increased whenever the decreased cost combined with the increased tonnage has more than offset the maintenance and interest charges. The only factor not in control of the management has been the increase of tonnage. This increased by slow degrees with the development of the country. At each stage of increase the road either had to improve and almost rebuild or turn over some of the increased traffic to a rival. Each time there has been a corresponding increase to the actual cost of the road, indeed a greater increase, for by mismanagement and fraud, exorbi-

is the value of the price.

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tant prices were paid for construction. The actual cost has been raised by the occasional necessity of purchasing superfluous parallel or branch lines in order to eliminate competitors.

Whenever the road has had to issue bonds or stocks at less than par, it has had to assume liabilities greater than the face benefits derived.

If the road has been forced to go through a reorganization this excessive capitalization may have been shrunk to figures more nearly representing its true cost of construction. But the usual method for a road in that condition is for it to satisfy its creditors by funding or issuing stock for their claims and to pay costs of reorganization with stock and bonds so that it emerges bearing a heavier load than ever. Thus Atchison emerged from her last reorganization with her capitalization increased 42%.

Stock-watering has three forms:

1. Stock issued as dividends which are applied to the improvement of the property. Issue by this means should represent an added value to the property and should be offset by increased earnings.

2. Pro rata distribution on account of increase in earnings capacity and market value.

3. Fraudulent issues not pro rata, sometimes representing merely stolen stock and sometimes an illegal attempt to secure control of the property.

The investor need not bother about the watered stock if the railroad is capable of sustaining the added burden upon its earning capacity. The average railroad on June 30, 1905 was un-

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...by the occasional necessity of providing...

also or through lines in order to eliminate connections.

Thereafter the word has had to leave words on account of

Love, you are, it has led to some little wonder that the

These patterns are well known.

It is said that the first of these was the first of the series.

This extensive compilation of data from 1970 through 1980 is the first of its kind.

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1. The first step is to identify the problem or question that needs to be answered. This involves understanding the context and the specific requirements of the task.

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CONFIDENTIAL

...da benettoni e altri colori del blu e altri colori del blu...

[illegible]

of his own ego under conditions of mental stress.

The University of Illinois at Chicago

and that of the other two is not known.

• **உயர்த்தல் வேண்டாம்**

It is important to remember no individual is ever one.

• *Subject to review by the Board of Directors*

—The Washington Post and Times Herald, 1940

Примечание: Идентификация не осуществляется при отсутствии в базе данных информации о документе.

...and to control the

7. *Conduct a literature search for relevant studies.*

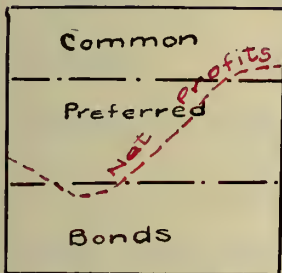
the railroad is capable of maintaining the right of way with

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able to bear the water imposed for its stock was quoted at 77.9¢ on the dollar. The general tendency of water is to cause a policy of management for present earnings at the expense of future prosperity. This will show plainly if in existence, prices charged for services and in "Possible Dividends." A few of the bad effects which have been caused are frauds by manipulation, rate wars, lower dividends and a distrust reaching upon the market. It has caused the establishment of parallel lines representing a lower capital investment.

Water has brought this benefit to the investor. The roads have been enabled to pay added dividends which represented the return on that potential element of real value above referred to.

The bonds if in too large a proportion to the stock are liable to lead to foreclosure against the company and the subsequent burden of reorganization. Thus if Net Profits encroach upon the charge of bonds, the bond holders may take recourse to legal remedies. Upon the slightest opportunity wreckers who hold bonds may take advantage of the company.



Bonds and stock per mile of line have been graphically presented in the charts following this exposition. The material for the charts has been secured from the reports of the Inter State Commerce Commission. The charts show clearly the changes in capitalization and the relative position of the roads. The figures are defective in that capital invested in holdings in subsidiary companies are represented in a per mileage capitalization. But these defects may be corrected by reference to the stockholders' reports.

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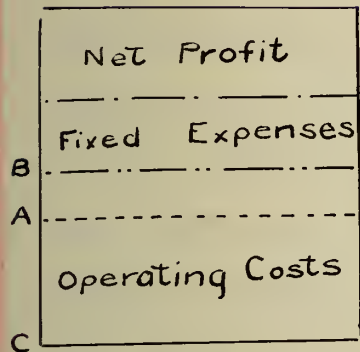
The purpose of the investigation is to determine the extent of the damage to the property of the company and to identify the persons responsible for the same. The investigation is being conducted by the company's legal counsel and the results will be reported to the board of directors.

These details may be corrected by reference to the "Statement of Assets and Liabilities" and the "Statement of Income and Expenses" which are appended to the report. The figures are given in full in the "Statement of Assets and Liabilities" and in condensed form in the "Statement of Income and Expenses". The figures are given in full in the "Statement of Assets and Liabilities" and in condensed form in the "Statement of Income and Expenses".

Pennsylvania's drop is caused by the incorporation within its system of accounting of poorer lines. Northwestern rose as she bought securities of other companies and fell as she incorporated them within her system. The general showing is for a constant investment, whereas in fact the value of the road has increased because of the improvements derived from earnings. Northwestern 1897-1902 spent more of its income for construction than for dividends. Recent developments tend to force a still greater capitalization of railroads. Owing to the systematic legal prosecutions of pooling agreements on the part of our government, it is almost impossible to establish remunerative competitive rates. These rates are constantly tending to become imperatively necessary. Since 1880 industry hampered by the same obstacle to pooled prices has been forced into the more stable unit of the huge, all embracing corporation, enjoying an almost monopolistic position and setting its own prices. Combination is being forced upon railroads but in a different way. Each combination, instead of uniting all competitive roads under one head, unites with other roads so as to form a more perfect transportation unit.

There is a more perfect illustration of this in the case of the American people. The American people are not a homogeneous people. They are a composite of many different races and nationalities. The American people are not a homogeneous people. They are a composite of many different races and nationalities. The American people are not a homogeneous people. They are a composite of many different races and nationalities.

In considering comparative efficiencies we must allow for the natural and physical conditions under which the road operates; as her grades, density of traffic and competitive lines. Dollars operating expenses per dollars earned in percentage gives the quickest and most general summary of operation and of efficiency of general management. The first thought of the management



is to cut down operating costs for every dollar saved there is a direct gain to net profits. Thus, if operating costs is reduced to AC, the difference AB goes directly to Net Profits, the residual element. This chart shows where the line A is fixed, but cannot show the di-

vision of the residue between fixed expenses and Net Profits. Investigation shows that standards of maintenance have been kept up. The especial features of the sheet are the drops of Atchison and Northern Pacific indicating the great increase in efficiency consequent upon reorganization. The general rise of the past few years has been caused by a great increase in expenses; especially labor and fuel.

The efficiency of actual operation is shown by ton and passenger miles per train mile. For that is the only unit of service that represents any constancy in the amount of energy necessary for its production. The cost of this energy is quite constant for different roads. It is clear then that the railroads utilizing these units to the best advantage will show the great efficiency. But different railroad managements must handle the densities and average length of unit hauls as they find them. They must adapt their services to these varying facts and so, as

IN CONSIDERING THE VARIOUS FACTORS WHICH ENTER INTO THE
CONSTRUCTION OF THE HUMAN MIND, IT IS EVIDENT THAT THE
MIND IS NOT A SIMPLE ENTITY, BUT A COMPLEX ONE, CAPABLE
OF PERFORMING A VAST VARIETY OF FUNCTIONS, AND OF
ADAPTING ITSELF TO THE CHANGING CIRCUMSTANCES OF
THE WORLD. THE MIND IS THE RESULT OF THE
INTERACTION OF THE PHYSICAL AND THE PSYCHICAL
ELEMENTS, AND IT IS THE DUTY OF THE
SCIENTIST TO STUDY THE NATURE OF THE
MIND, AND TO DISCOVER THE LAWS WHICH
GOVERN ITS ACTION. THE MIND IS THE
MOST VALUABLE OF ALL THE GIFTS OF
HEAVEN, AND IT IS THE DUTY OF THE
PARENT TO CULTIVATE IT, AND TO
PREPARE THE CHILD FOR THE
FUTURE. THE MIND IS THE
KEYSTONE OF THE ARCH OF
HUMANITY, AND IT IS THE
DUTY OF THE EDUCATOR TO
SUPPORT IT, AND TO
PREVENT IT FROM COLLAPSING.

investigators, we must first study relative densities and hauls.

Freight and passenger density per mile of road show relative densities. A steady increase (as shown by all roads) may denote either that the railroads have grown up with the country, or that the differential ability of the management has resulted in inroads upon the traffic of other roads. Western roads show development with the country. Pennsylvania, Illinois Central, Atchison and Northern Pacific have gains out of proportion to national development because their managements have secured more than their proportionate share of new traffic. Pennsylvania leads a class whose density varies as industrial production, Northwestern a class whose density varies as agricultural production, and New York Central a class whose density remains constant, variations in one class of traffic offsetting those in another class of traffic. Passenger density varies primarily as that part of the American's income set apart for transportation. This chart shows a tendency of the average American to keep at work till less busy times afford leisure for travel. Abnormal densities are caused by increased attractions to travel, as fairs, et cetera. Ton miles per ton and passenger miles per passenger show the average distance each unit is carried. This is of importance in its relation to costs for the operating expenses of a shipment are but a fractional part of the whole cost of moving the freight. Price does not fall in proportion to cost of service as distance hauled is a factor of price. Hence a long haul denotes remunerative traffic unless long haul competitive shipments enter to a large extent. Atchison shows an increase participated in by both through and long distance

monopolistic traffic. On the passenger chart Hill's assumption of management helped to cause an improvement in Northern Pacific's line. In fact he has brought about an improvement to Northern Pacific on every chart developed. Pennsylvania is exaggerated ten times to show the steady improvement of eastern roads.

Having examined the tools with which the management has to work, we may now look at the true efficiency charts- ton miles per freight train mile and passenger miles per passenger train mile. They tell to what extent the management has been able to utilize their train service units. For a cursory investigation, such as we are making, these charts are highly satisfactory. The tendency of efficiency is shown for each road by the trend of its line but for purposes of comparison, we must weight our results with those obtained in our density and distance charts. Hill's management has its usual effect on Northern Pacific. The general fall in passenger efficiency '94-'95 was due to the cessation of the abnormal traffic of the Columbian-Exposition.

...THE INCOME OF A RAILROAD...

The income of a railroad is derived from two general sources: from the operation of trains and from interest on loans and investments and from rentals. The former is measured by the gross earnings of the company, the latter is usually of such slight importance and is so irregular in amount that the laws regarding its make-up can only be mentioned in a general manner. They are the same as those for expenditures for rent and interest and will be considered under that head. The income from operation

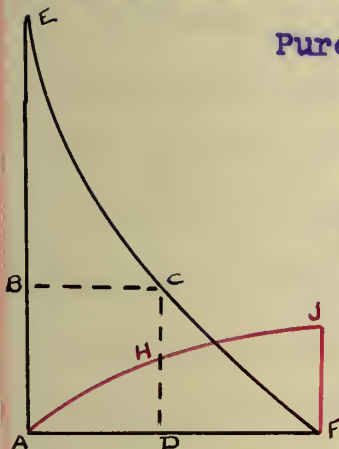
comes from freight, passenger and miscellaneous sources.

Freight is by far the most important source of revenue. During 1903, it comprised 70.44% of gross earnings. The railroad occupies a competitive position in regard to a portion of its traffic and a monopolistic position in regard to another portion, usually a greater portion than its competitive portion.

Purely monopolistic rates would be fixed as follows:

Let AE and AF represent gradations respectively in price offered and in volume to be shipped.

The management of the railroad must ascertain by experiment the points making the line EF, which determine in each case the amount of freight that will be shipped at each variation in price. As the



quantity shipped increases the cost of service will increase but not proportionately for the cost per unit of service is made up of expenses not so contingent. The former comprise the costs of (1) production of motive power, (2) train service and supplies, (3) supervision and superintendence, (4) that portion of maintenance of way and of equipment caused by actual use. If we now assume that the management utilizes uniformly the units thus produced, the costs from this source will vary approximately as the quantity shipped.

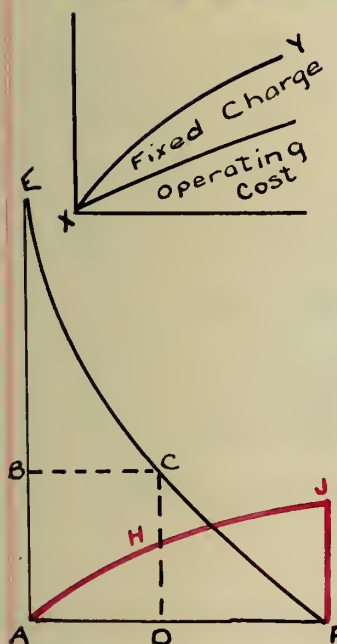
Besides actually transporting the freight, the railroad does a vast amount of work preparatory and complementary to the actual transportation. This work consists mainly in the establishment and maintenance of a plant for the assembling of freight at convenient points for transporting it to the required destination. Thomas F. Woodlock classifies this expenditure as follows:

The only - unambiguously defined position is within a system position, which
 is a position position. It is a position position.

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● 中国文学史(1979)

- I. Expenses for general direction, clerical work and supervision—practically fixed and existent whether the road does business or not. This expense decreases in proportion as the gross earnings increase.
2. Expenses for collection and handling of freight at terminals and intermediate points. This expense is a fixed charge upon the quantity element in traffic and is irrespective of length of haul.
3. Expenses for maintenance and operation of plant not dependent upon the movement of trains. This expense is fixed and is a charge upon shipments decreasing in amount as the volume of traffic approaches that volume for which the road is adapted and which it will handle with the greatest efficiency. For purposes of theory we can assume with truth then that the indirect charge decreases as the gross earnings representing price \times quantity increased.



Thus, the total cost may be represented by a curve XY approaching in character a straight line.

Referring back to our previous diagram and recalling that we now have found the line EF which shows the volume of traffic which will respond to each variation in price and hence, the size of the parallelogram or the gross earnings that may be secured. Now since the line AJ fixing costs will cast off a certain amount of the parallelogram in each case, that parallelogram which will have the greatest portion of itself left after costs are deducted will represent the greatest net earnings which the road can possibly secure from its rates fixed, from a monopolistic standpoint. The point at which the parallelogram cuts the vertical scale will determine the price to be charged to produce this highest net earn-

ings are obtained; it is the policy of all managements to charge such a price whenever possible.

But this price should represent that which will produce the greatest net earnings in a long series of years, not in the immediate present. This makes necessary the introduction of such considerations as stability of rates, elasticity to allow of recuperations in times of stress and moderateness in order to allow the development of industry along the line of road. The tendency of the railroad policy is to disregard the first and third factors to a great extent while the state tends to force the railroads to observe them. The railroads look at the matter in this way: If they allow part of the present net earnings to be derived from transportation to be used by the industries profiting by the savings, the potential profit to be derived from future traffic may be stolen from them by some competing line now in existence or which may be constructed paralleling them. Low rates unquestionably do aid in the development of the country, for every cent saved by a shipper results in a cent increase in profit, the residual element of his operation sheet. But transportation tends to become a smaller portion of the costs of production and distribution.

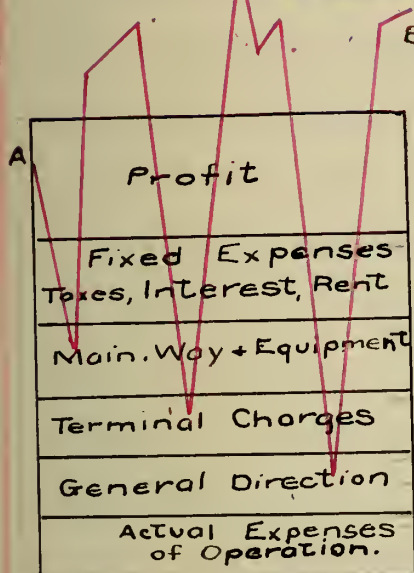
1. The drop in rates, so characteristic of American transportation, results in this: lower rates X same amount shipped = less resultant charge for transportation.

2. The saving in cross freights being constantly effected by industrial combinations make a saving in transportation.

3. The other costs of production and distribution are being raised disproportionately to transportation as the charges of advertising, labor, et cetera.

As competition enters as a factor the price tends to be forced below the real monopolistic price and even below actual costs of service. By a competitive price a railroad obtains traffic which it would otherwise not handle.

We must study the composition of the costs of shipment.



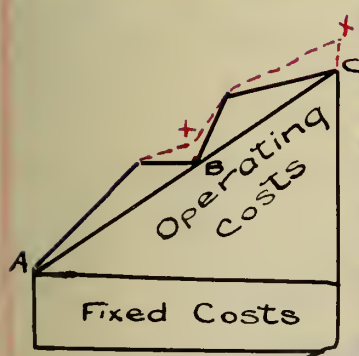
This diagram represents the various elements which the gross earnings must comprise and be equal to in order that the operation of the road may be profitable. If the management attain this result, they are satisfied. But they do not attempt to make every unit of traffic bear its share toward bringing about this result. Some traffic, as coal, minerals, et cetera, would be lost entirely

as traffic while some commodities, as glass, gold and furniture, would not pay as much as their added place value brought about by the railroads warrants. So the railroads adopt the principle of charging only what the traffic will bear, caring only that the total gross earnings turned in will contain the indicated elements. The rates charged may then be represented by the line AB. The lower limit of AB will be the actual cost of operating consequent on that particular shipment plus the increase in general direction and terminal costs which would not occur but for that shipment

Now when competitive shipments are offered, the management finds that it cannot charge the monopolistic prices, nor can it charge what the traffic will bear, but it is compelled to underbid the competing road. When will it attempt to underbid and when will it not? We see by our diagram that the real profit

on a single shipment is the residue after all other charges have been satisfied. If the road secures added shipments, which it may either by increasing density or distance, those charges which are required by the operation of a road but still do not increase in amount in proportion to traffic offered, will be lessened for each individual shipment and each individual shipment will therefore return a greater profit. But if this added traffic does not bear the real cost attendant to its shipment, the increased profit of the other shipments must make up the difference. If it is not enough to do this the railroad will not have gained by increasing its traffic. Railroads will then underbid for competitive traffic as long as the increase results in an increase in their total residual profit.

The legislative control of the government does not allow rates to be economically fixed by the operation of competitive and monopolistic laws. The Interstate Commerce Act of 1887 forbade the charging of a greater price for a shorter distance than a longer. So a curious combination of the two methods came into practice. Let us examine a stretch of road 1000 miles long. Certain fixed costs will remain constant regardless of the distance while other costs will increase in proportion with it. At high-



ly competitive places as B and C the price of shipment from A will tend to approach real cost. While the statute compells the rate to all points closer than B and C to be at least as low as B and C, if by agreement with other roads, i.e. by pooling, the rate at B and C can be raised to the points indicated by X, they may raise the rates all along the line to points representing more nearly their real monopolistic

price and hence the net earnings of the company will be greatly increased. In spite of it's illegality, pooling is becoming more and more universal because of the great economic advantage to be obtained thereby.

Summarizing the benefits to the investor accruing from the present tendencies of rates, we may state that the greater development and wealth of the country is leading to the establishment of more competitive points but the bad effects of competitive rates are being eliminated by pooling so that the investor may reasonably expect an increase in profits.

Let us now consider this question- What is the general tendency in regard to the trend of densities and distances of traffic? The detailed study of this question has been rendered difficult and incomplete by the fact that only recently has the demand for publicity in reports resulted in a detailed classification of freight traffic.

The traffic resulting from products of agriculture fluctuates with the crops but shows a steady tendency to increase as a whole, though wheat decreases.

A statistical presentation of our national crops for the last ten years show an approximate increase in the corn crop of 10%, in the oat crop of 9%, an increase in wheat, which has been offset by the decline of the last few years, and an increase in cotton of over 15%. This general increase has of course resulted in a proportionately greater traffic to the railroads. As the animal industry is crowded out by the more extensive agricultural conditions we may expect that tonnage to diminish. But the elimination of the small butcher by the great packer has caused increased shipments of meat which have offset this loss.

Manufactures and the raw products entering into their composition show a decided increase but vary with the commercial conditions of the country. Thus, anthracite coal shows an increased production of 35%, pig iron of 75%. Forests alone have not participated in this vast increase for they are fast being consumed and as the supply diminishes the price advances to diminish consumption.

The density of commodities will then tend to increase. The country will import raw materials it itself is not able to furnish and these importations will greatly aid the empty car movement and the average distance of shipment. The increased demand will cause a utilization of the products of more distant mines. So the average distance will be lengthened.

Passenger earnings consisted in 1903 of 22.52% of gross earnings. They are therefore of minor importance as compared with freight. Passenger revenue is derived from two sources:

I. The regular traffic which is handled at normal rates.

2. That traffic which can only be induced by low rates and which represents a portion of the passenger income diverted to travel which otherwise the railroads could not secure.

The rates of regular traffic have reached a point where they remain almost stationary. The universal principle of application is on per mileage basis for the intelligence of the person carried would render nugatory the application of any other principle.

Thus should a rate be established between A and B which is less in proportion than that from C to B passengers going from C to A would buy a ticket to B, ride to C and sell their ticket to a broker,

A
|
C
|
B

not certified in any way to the fact that the

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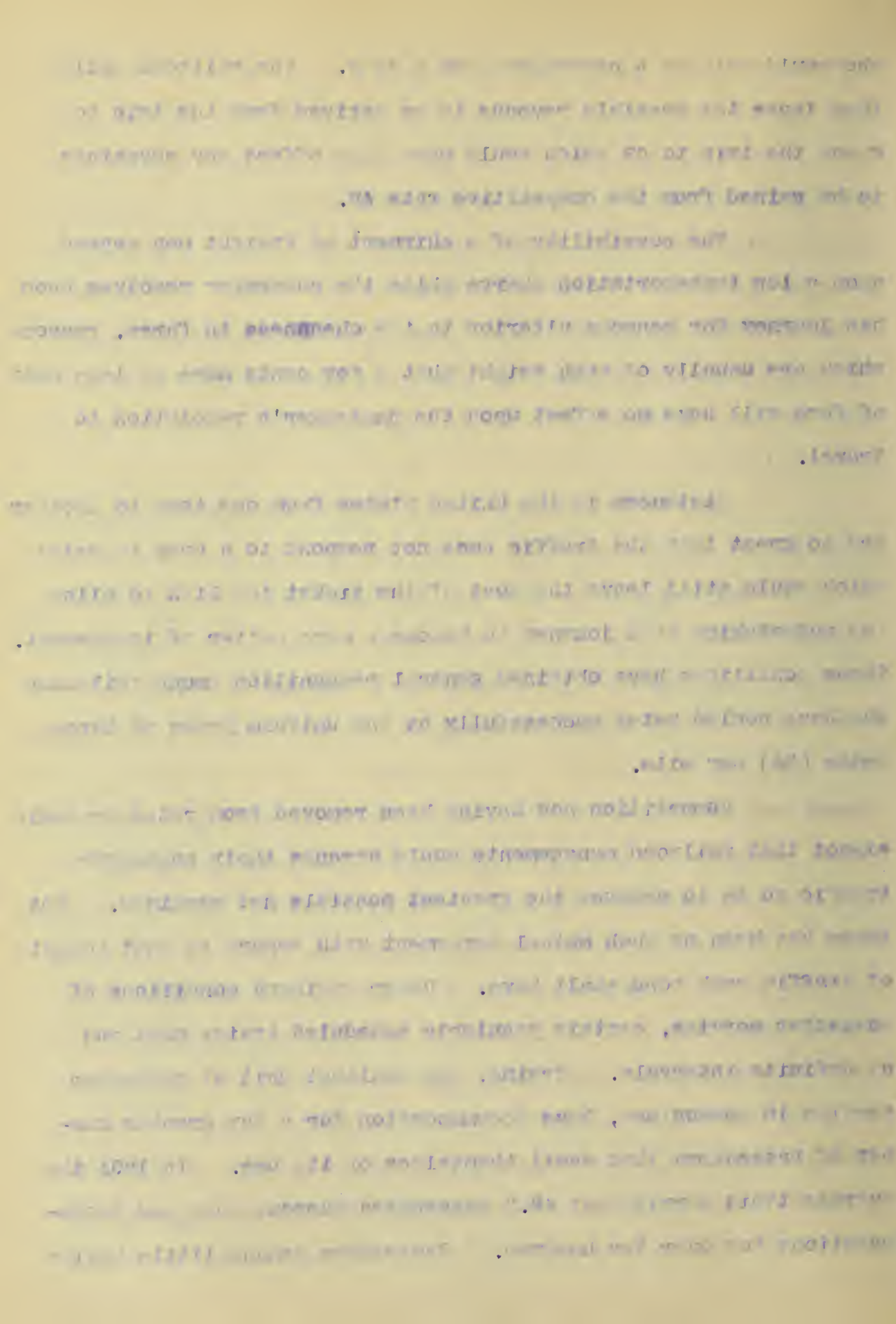
1. The report shall be filed at once.

who would sell to a passenger from C to B. The railroad would then lose the possible revenue to be derived from the trip to C and the trip to CB which would more than offset any advantage to be gained from the competitive rate AB.

The possibility of a shipment of freight may depend upon a low transportation charge while the passenger resolves upon his journey for reasons ulterior to the cheapness in fares, reasons which are usually of such weight that a few cents more or less cost of fare will have no effect upon the passenger's resolution to travel.

Distances in the United States from one town to another are so great that the traffic does not respond to a drop in price which would still leave the cost of the ticket too high to allow the undertaking of a journey to become a mere matter of inducement. These conditions have obtained general recognition among railroads who have pooled rates successfully at the uniform price of three cents (3¢) per mile.

Competition now having been removed from rates we would expect that railroad managements would arrange their passenger traffic so as to produce the greatest possible net earnings. But there has been no such mutual agreement with regard to what amount of traffic each road shall have. Under ordinary conditions of passenger service, certain regularly scheduled trains must run at definite intervals. Trains, the smallest unit of passenger service in common use, have accommodation for a far greater number of passengers than avail themselves of its use. In 1903 the average train carried but 48.7 passengers whereas they had accommodations for over two hundred. Passengers demand little beside



actual train service. Their transportation incurs no large terminal expense, delay in return of cars. So each passenger added to the train load will cause an added cost to the railroads of almost nothing, for did he not travel, his actual costs of transportation would be an added charge pro rata against the costs of the other passengers. So this proposition came before the roads. Every increase that they could secure in their passenger density per train would result in a profit to them measured by the difference between the fares of such passengers and the cost of inducing them to travel.

This added density could only be secured by their managing to get a larger portion of the competitive traffic. The roads already had all the traffic that their monopolistic position could furnish. No field for expansion was open but the competitive traffic. So extensive expenditures for costly advertising were made; showy costly trains were installed, as Old Glory, the Golden State Limited, the New York State Limited, Flyer, et cetera, efficiency was sacrificed for the benefit of promptness and speed; abnormal expenditures were indulged in for the sake of safety, comfort and convenience, such as ~~the~~ settling road bed dust with petroleum. If one railroad had been content to enter upon this policy it would undoubtedly have resulted to its great benefit. But competing roads took it up simultaneously, the inducements neutralized one another, not enough new traffic was created to pay for this expenditure, and the cost of it all fell upon the railroads. Not only were the gross passenger earnings of the increased density wiped out but the charge upon the former passengers has been increased to such an extent that the savings that must

It is not only the fact that the Government has been forced to spend money on the roads, but the fact that the Government has been forced to spend money on the roads, that is the real reason why the Government has been forced to spend money on the roads. The Government has been forced to spend money on the roads, and the Government has been forced to spend money on the roads, and the Government has been forced to spend money on the roads.

have been caused by the same efficient managements which have so greatly reduced the cost of handling freight, have been offset. Improvements in the passenger returns in respect to almost every road have been due to an increase in mere volume of passengers handled which has paralleled the growth in population.

Through the courtesy of Mr. George Chapin, I have been enabled to find that over one-half of the railroad advertising is paid for by the issue of passes. Articles have been written deploring this practice but it is based upon sound economic theory. The utility of the pass to some recipients will be very slight while to others the utility will approach the face value of the mileage. The average utility of the pass will then represent its cash value as it serves as a means of payment for the advertising. In addition there is that benefit to be derived from the good-will which the recipient believing the pass to be worth its face value, always holds to-wards the company. He frequently exhibits this good-will in free "puffs" and "write-ups." The users of the passes are saved from paying for the trips they would have taken regardless of the pass and the saving results in just that much cost to the railroads. But passes rarely suit the desires of the recipients so well and this cost is very slight compared with the amount issued.

The user of the pass induced solely by its gratuitous nature appears as an increased density in the passenger service. We have seen how such increase is attended with very little cost on the part of the railroads. The total cost to the roads consequent to the issue of passes is thus far below the real value obtained for them. Some of the best media, however,

There have been some cases of the disease in the past, but it is not common. It is a disease of the lungs, and is caused by a germ which is found in the air. It is a disease of the lungs, and is caused by a germ which is found in the air. It is a disease of the lungs, and is caused by a germ which is found in the air.

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~~dem~~and cash. A superabundant issue will demoralize the road and lower its prestige in the eyes of the public. Arrived at this point the position of the road as an advertiser will depend upon the differential strength of its advertising men as exercised in (1) the choice and bargaining with media; (2) the employment of artists; (3) their skill in expression, embodying therein originality and ability at the right time, ^{choice of} the right material and ^{his policy} to advertise in a coherent manner and as his typographical ability exhibits itself.

The traveling expenditures of the American public may be considered as a fund set apart from their income. If the railroad can induce an enlargement of this fund, it will profit to a proportionate extent. Thus, excursions inducing traffic which otherwise would not exist do not detract in the least from the gross earnings obtained from regular traffic. All earnings from this source in excess of actual costs of operating costs of the excursions are an addition to net income of the railroads. Besides the present money profit in excursions they are instruments of potential good. They advertise the railroads and are aids to investigation which results in settlement and development along the lines. Scalpers were formerly given tickets to sell at low rates so that the road might secure a larger share of competitive traffic. It was an underhand method of breaking pooling agreements now generally condemned and seldom used.

The last division of gross earnings is from miscellaneous sources, such as express, mail and car-hire and is of slight importance amounting in American railroads to 7.04%. These sources are almost all due to the rental to other corpor-

admitted in a coherent manner and he has typographical errors
and errors in the text, the text is not
correct; (2) some words are corrected, others are not
(1) the errors are not corrected; (2) the errors are
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ations of some of its properties or privileges. As the roads tend to integrate they will assume the functions now performed by these other companies and thus revenue from this source will tend to be eliminated.

The charts prepared to show comparative gross earnings and their relations to the elements entering therein are: Gross Earnings per Mile of Road, Passenger Earnings per Mile of Road, Freight Earnings per Mile of Road, and the component elements of Revenue per Ton Mile, Revenue per Passenger Mile, and the density sheets previously explained in their relation to efficiency.

Gross earnings per mile of road shows the relation of earnings to fixed investment, depicting the comparative result attained by the various efficiencies combined with densities and prices of service. The managements strain themselves to the utmost to make this average as high as possible and the real earning powers are thus laid bare to the eyes of investors before being hidden by maintenance charges embodying the investment of income in construction.

Freight and passenger earnings per mile of road show the earning powers of the various companies in these departments. Here are pictured the actual results obtained by the managements after their exercise of all the advantages possessed by the company.

The composite nature of the elements entering into the production of this average makes it of little value to the railroad statistician but it shows the investor what weight to allow for the especial advantages claimed by the company.

Revenue per ton and per passenger mile indicate the commercial conditions and the price of service. The general

other companies in this country from this source will have to be
to this extent that the Government has determined by statute
to make it more of its responsibility to provide for the

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the company.

THE COMMISSIONER OF THE ALABAMA DEPARTMENT OF REVENUE
 HAS THE HONOR TO ADVISE YOU THAT THE STATE OF ALABAMA
 HAS AGRANTED A LICENSE TO THE ALABAMA POWER CO. TO
 CONSTRUCT AND OPERATE A DAM AND POWER PLANT ON THE
 ALABAMA RIVER AT A POINT NEAR THE TOWN OF
 ANDERSON, IN THE COUNTY OF LAMAR, ALABAMA.
 THE LICENSE WAS GRANTED BY THE COMMISSIONER OF REVENUE
 ON THE 15TH DAY OF MARCH, 1934, AND IS VALID FOR
 A TERM OF FIVE YEARS, EXPIRING ON THE 15TH DAY OF
 MARCH, 1939.

average may be modified by the fluctuations of low class or competitive freight. The price charted is the average charge for service after all the laws regarding the fixing of rates have had full scope. Two items of interest are to be noted on the freight sheet: the drops in Pennsylvania's and New York, New Haven's prices during the years '98-'99, Pennsylvania's stimulating shipments so as to increase her freight earnings and New York, New Haven and Hartford's causing a decrease in her freight earnings almost proportionate to the variation in price.

On the passenger sheet, Northern Pacific's price was lowered by Hill as soon as he assumed control, Chicago, Rock Island and Pacific's high price during 1900-.01 was chiefly caused by the manipulation consequent to the development of the Moore Brothers' scheme of consolidation into the Rock Island Company.

...ANALYSIS OF RAILROAD DISBURSEMENTS...

The expenses chargeable against gross earnings are maintenance of way, maintenance of equipment, conducting transportation and general expenses. The lower the total of these expenses are kept, the larger are the net earnings left. The success of the managements in leaving relative positions of gross earnings as net earnings has been charted in "Expenses to Earnings." The amount of operating and general expenses are dependent upon the relative efficiencies already studied and the various elements of cost of material, wages, rent and interest which will be taken up in detail. Besides the elements, maintenance of way and of equipment comprise an insurance fund. The amounts of these items then largely depend upon that portion of their total set aside for these funds.

reference may be made to the fact that the above-mentioned
relative results. The above results are the average of the
ages after all the time making the study of the same. The
group. Two items of interest are to be noted on the first
sheet: the group in Pennsylvania and New York, New York's
value is 100-100, Pennsylvania's a stimulating character
as to increase in the first winter and New York, New York
Pennsylvania's value is 100-100, Pennsylvania's a stimulating character
reference to the variation in value.

On the present sheet, Pennsylvania's
value was lowered to 100 as seen in the above-mentioned, 100-100,
New York and Pennsylvania's value were 100-100. It was relative
value of the individual component to the average of the
New York group, a value of 100-100 into the New York group
value.

...ANALYSIS OF RAILROAD INVESTMENT...

The expenses of the railroad are divided into three main
categories of way, maintenance of equipment, and other
operation and control expenses. The first two total of about
\$100,000,000. The third one is the last category, the
operation of the railroad in terms of relative position of cost
relative to the railroad and other classes in terms of cost.
The amount of operation and control expenses is \$100,000,000.
The relative efficiency of the railroad and other classes is
of cost of operation, maintenance, and other classes will be
up in detail. Because the relative efficiency of the railroad
relative to other classes in terms of cost. The amount of
cost relative to other classes is \$100,000,000.

If the expenditures for maintenance were regulated by strict ideal theoretical accounting just that amount would be spent which would suffice in keeping the value of the property constant. Every dollar spent over this amount enhances the real investment in the road and makes the road worth that much more. But in practice, gross earnings fluctuate, as we have seen, greatly in amount. Depressions, poor crops, et cetera, all tend to effect this. The management, however, want the real earnings, the dividends which may legally be declared to remain as constant as possible in order that the commercial value of its securities may remain as high as possible. One of the leading inducements to investment is the regularity of return and only by constant net earnings can this result be attained. Expenditures must then be graduated to produce this result. Expenditures for operating and general purposes accumulate irrespective of the will of the management but according to their discretion lie the expenditures for maintenance. So in prosperous times, standards of maintenance are far in advance of the real needs of the property, while in times of depression, they fall far below them, the aim of the management being to keep the real standard for a long series of years at that point demanded by the needs of the management. The excess in plentiful years may then be described as a kind of insurance fund. At the close of a long depression we find that this fund is more than used up and net earnings and consequently dividends are affected in spite of the efforts of the management. Thus during a protracted depression of 1895 failures to pass dividends were made by the following railroads: Chicago, Rock Island and Pacific, Northwestern, Chicago, Burlington and

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Quincy, Baltimore and Ohio, Michigan Central, Canada Southern, New York, New Haven and Hartford, and a portion of the Pennsylvania system, the Pittsburg, Chicago, Cincinnati and St. Louis; whereas during the acutest period of the depression in 1903, their maintenance insurance funds enabled them to keep up their dividends. The respective policies of the roads with regard to these insurance funds may be observed in the expenditure charts at the end of this exposition. The tendency for the last few years seems to have been this: the managements believe that, in the long period of prosperity now being enjoyed, these funds have amounted to sufficient proportions and the surplus expenditure not needed for dividends tends to assume the form of direct charges to income for construction. These disbursements are open to the public and the roads gain more prestige thereby than they could by accumulating an abnormal fund to offset the fall of their prestige consequent to an acknowledgement of lower earnings. Thus the Northwestern have during the five years ending 1902 charged more of their earnings to further construction than to dividends.

All dispositions of gross earnings are made among these economic elements:

1. Cost of materials.
2. Wages.
3. Interest.
4. Rent.
5. Wages of Superintendence.
6. Insurance.
7. Profit which last comprises dividends and money kept in the business.

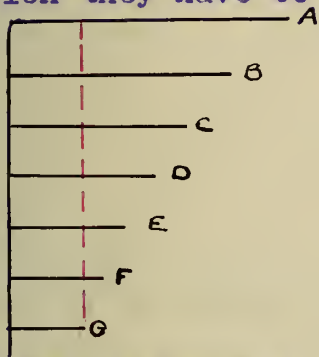
factory, building and other, electric central, Canada, railway,
 New York, New Jersey and elsewhere, in a portion of the country.
 which existed, the railway, Chicago, (approximately) and St. Louis;
 numerous during the earliest period of its operation in 1835, 1836,
 maintenance throughout, which enabled them to look up their stock-
 bonds. The preliminary volume of the volume with regard to the
 numerous ways of recovery in the numerous ways in the
 and of this expedition. The volume for the first two years was
 to have been this; the numerous ways in the first two years
 for or possibly not being enjoyed, which have been devoted to
 sufficient knowledge and the various experiments not needed for
 numerous ways to make the use of direct methods in future.
 for construction. These experiments are open to the public
 and the volume will be presented to the public by the
 which an attempt will be made to reflect the use of their respective
 present to an examination of their respective, thus and which
 western have been the five years ending 1835 (about) more or
 their respective in future construction than to others.

All experiments of these nature are made under the
 economic principle:

1. List of materials.
2. List of
3. List of
4. List of
5. List of
6. List of
7. List of
8. List of
9. List of
10. List of

Every expenditure shown on the operation sheets of any railroad is comprised of one or more of these elements; the laws regarding the expenditure for each of these elements are the same in each case and therefore by study of these laws can we most systematically study the tendencies of all expenditures.

The cost to the railroads of materials is the price which they have to pay for them as they buy them in the open market.



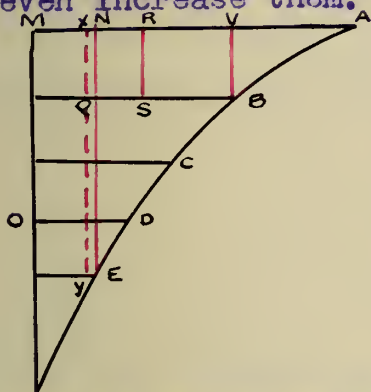
This price is fixed as follows: Producers of supply have to sell a certain quantity at the highest price obtainable. These products have various utilities to consumers and according as these utilities are given

a definite form in the minds of the consumers, they become willing to buy. The prices at which they become willing may be represented by a series of gradations A to H. The price is then fixed at the highest point at which the whole supply will be bought will be the economic price- as G and A, B and C, who are willing to pay extraordinary prices for the goods may obtain them very reasonably at G. If the price G does not allow a profit on the goods to the producers, they will stop producing until the diminished supply will sell at a higher price.

But railroads do not present a uniform demand for materials. They purchase inordinate amounts when, in times of prosperity, high gross earnings allow high standards of maintenance. The materials used by railroads are ordinarily of such a character that the demand for them comes solely from the railroads. All the roads experience the same periods of depression and expansion though in different degrees of acuteness; all resolve to raise

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their standards and buy more materials at the same; and an inordinate demand results which cannot be assuaged by the producing agents except at very high prices. On the other hand, producers have discovered that by reducing supply they may still secure profits, even increase them.



Thus where the real economic price is fixed at D and the cost is represented by OY, the profit resulting from production will be equal to XYDN. Now if by limiting production the price is put at B, the producers manufacture but one-third of their previous output and the

cost of operation will be one-third. After the old profits XRTS have been deducted there still remains RVBS. That portion of RVBS in excess of the damage resulting to the producers from leaving two-thirds of their plants unutilized will be the inducement to the producers to limit the supply. This they have been able to do more or less perfectly by means of pools, combinations, monopolistic corporations, et cetera.

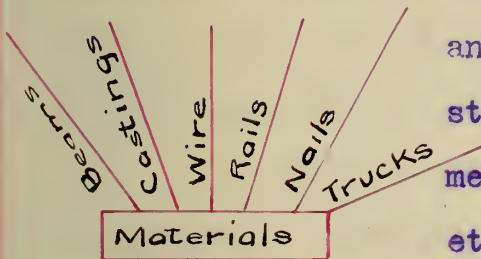
The railroads have been driven to discover and put into effect a remedy for this state of affairs. This has been by integration, by putting themselves in such a position that they could enter the market as competitors for unfinished products. Unfinished products are such staple articles of trade, such a broad market exists, such great numbers of independent producers and such a vast amount of capital is engaged in their production that no artificial restriction can be placed upon output. Moreover the larger part of the demand comes from consumers who are willing to give prices allowing but a slight margin of profit. The producers find that they can obtain larger aggregate profits by

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supplying a large consumption at a moderate profit and, as a result, railroads are enabled to effect a considerable saving in their expenditures for materials.

In addition, although still hampered by the fact that the extent of their purchases must depend largely upon the residual portion of gross earnings left to them for discretionary expenditure, they may take advantage of fluctuations in the market.

Where previously the roads had to purchase materials for which they could find immediate and direct utilization, now they may buy stocks for general use. Thus, with steel formerly they had to buy directly the wire, rails et cetera. Over purchase would mean the



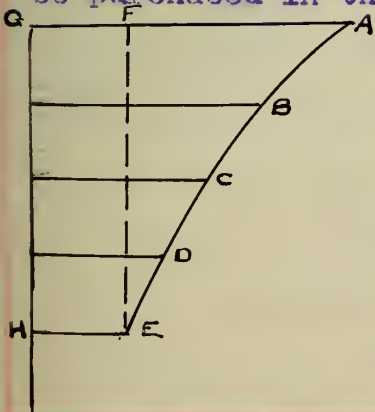
tying-up of a great amount of capital which they cannot free as occasion. Now they may, if the price is advantageous, buy great quantities of pig iron or steel billets, confident of being able to utilize them within the immediate future.

They may transform the unfinished products into materials of more common use as wire, car trucks, rails, nails and spikes, or, as occasion demands, into the more unusual forms as structural beams for depots and elevation and for highly ornamental castings as in seats and office fixtures. The requirements of the operation sheet are simply that a certain residual amount be charged to maintenance. If the price is favorable enough the whole of this amount may be invested in materials and its utilization for the improvement of the road may be postponed till the allotment of a succeeding year allows its transformation and application to the use of the company. Though temporarily deferred the road will still receive the same average improvement

The first question is whether the amount of the loan should be paid in cash or by the issue of bonds. The second question is whether the loan should be made for a fixed term or for a variable term. The third question is whether the loan should be made for a fixed rate or for a variable rate. The fourth question is whether the loan should be made for a fixed amount or for a variable amount. The fifth question is whether the loan should be made for a fixed period or for a variable period. The sixth question is whether the loan should be made for a fixed interest rate or for a variable interest rate. The seventh question is whether the loan should be made for a fixed principal or for a variable principal. The eighth question is whether the loan should be made for a fixed collateral or for a variable collateral. The ninth question is whether the loan should be made for a fixed security or for a variable security. The tenth question is whether the loan should be made for a fixed guarantee or for a variable guarantee.

and the company will profit by the saving in price. This condition is far from having been attained, but as integration and amalgamation increases the roads will tend to assume this advantageous position. Materials then tend to become less of a proportionate expenditure in the future. During the year ending June 30th, 1902, American railroads expended 41.17% of their total gross earnings in wages, the largest proportion thus expended for a series of years. The reason for this has been increasing high cost of labor. In studying wages we must explain the relations between the railroads and laborers.

A railroad represents a fixed expenditure, a plant which must be operated in order to produce any gross earnings at all. Labor to operate this plant must be obtained at any price. The operation must be efficient and so wages are spent for superintendence. The maintenance of the road is very important but not so much so as the operation and superintendence of the road, and therefore the utility of the laborers employed will be less. Improvements and further construction are desirable but not requisite and so the wages expended for this purpose represent a further gradation in utility. Likewise when labor is employed to transform unfinished materials which may be purchased in the open market in their completed state.



Thus we may allow ABCD and E to represent the various utilities of these classes of laborers to the railroads; eliminating all questions of skill, E will fix the real worth to the road of any class, and should any class demand more wages than their real worth, the road will

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train the class below to perform the work. Thus if A demands more than the marginal wage, the road will train B to do A's work, C to do B's work and so on till E takes D's position, when the railroad will supply class E's former position with labor from the available labor supply; which will not thereby be diminished for it has been augmented by the discharge of A. Position E will be filled just as long as the utility derived by such labor exceeds the cost to the railroad. If in time of depression, relative utilities decrease so that E is not worth its cost, E will be discharged unless the value of the organization, already perfected and which would be impaired by the discharge of E, exceeds the loss incurred in keeping it employed; or the road may feel the responsibility of their employees' dependence upon them for a livelihood and keep them on the pay-roll although losing money by so doing.

The railroad must pay for this labor the price in the open labor market, for should it pay less the laborers will all leave to work for employers offering higher inducements. The railroad has within the last few years found increasing opportunities to use labor. The increased density in traffic has caused a demand for greater quantities for labor for operation. Higher standards of maintenance have the same result; so have the more extensive improvements, and the expansion of the railroad as it integrates. Laborers have not increased in sufficient quantities to supply the demand. The available supply has satisfied the demands which afford the greatest amount of utility to the employers, and the marginal utility of labor has increased resulting in a rise in price. Usually this increase has been

There is a very strong feeling in the country that the Government should not be allowed to take any action which would result in the loss of the country's independence. The Government should not be allowed to take any action which would result in the loss of the country's independence. The Government should not be allowed to take any action which would result in the loss of the country's independence.

gradual but many instances exist where the increase has rather been by leaps and bounds. Thus, in 1902 Pennsylvania made a 10% increase in all wages paid by them. Inertia tended to restrain this advance, as also did the unwillingness of employers to allow it but the laborers have succeeded in obtaining it by organized action, as through their unions and by means of strikes, boycotts, et cetera.

This rise in price has been especially noticeable in respect to railroads. The supply of labor available for railroad employment is so restricted because of the high physical, moral and mental requirements that but a very small portion of the national supply can compete. A railroad employee must have a strong physique to stand the arduous work, his senses of sight and hearing must be highly developed so that he may promptly perceive signals and unusual occurrences and avoid wrecks. He must not be immoral for immorality lowers his physical efficiency, produces a depressing effect upon traffic and endangers property and lives. The intricate system of railroading requires a high intelligence in order that he can work harmoniously and effectually and embodied capital assumes forms requiring the highest technical ability to operate, as the locomotive, telegraph, et cetera. More than this is required before the employee can consider himself a part of the available supply. He must have what is commonly termed nerve, the ability to do the right thing at the right time, perfect self-control in times of unusual mental stress. He must have endurance to withstand the strain consequent to long runs or long periods of duty in positions of intense responsibility. He must be willing to do

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this rigorous and arduous work for the sake of the slightly higher wages paid for this service or for some innate preference for this sort of work, perhaps from love of excitement or from a desire to exact from oneself the highest possible amount of efficiency.

Thus we readily perceive that the relative portion of labor satisfying these requirements is very small indeed. That portion which does enjoys a monopolistic position from the possession of extraordinary attainments. Labor of this kind is highly organized and in such a position to make a united demand for their real marginal work to the railroads that they rarely fail to obtain that price.

The tendency seems to be to systematize railroad operation in such a manner as to lessen the intensity of some of the qualities required. With double tracks, box systems of dispatching, automatic signals, elevated roads and crossings, more durable bridges and tracks and the construction of embankments to prevent wash-outs, the danger element is being greatly lessened and many men who hitherto held off on account of the danger involved in the work, enter the ranks of the available supply. At the same ^{time} the physical, moral, and mental qualifications are being raised, physical examinations are more rigorous, the senses of sight and hearing must be more uniformly highly developed, drunkenness and obscenity is being more often punished by discharge and more applications of new labor are being refused for these reasons. This lessens the element of danger through the negligence of fellow service but limits the field of available

1. The first step is to identify the problem or goal. This involves understanding the current situation and what needs to be achieved.

— This is another example of the same thing.

the tendency seems to be to emphasize the
tendency to want a woman to have the ability to
the studies needed. Then come the
of education, economic affairs, and the
the family and the individual in general
and is a very important part of the
and many of the other held out in front of the
is involved in the fact, that the woman is
ly, as the man the physical, mental, and moral
the body, mental, and moral
of the mind and body, and the
and, therefore, and otherwise to be the same
technique and the application of the law of the
these reasons. This is the reason for the
of the law of the mind and body.

supply. Equipment and other forms of embodied capital are becoming more intricate and require greater technical knowledge for operations. Thus tendencies to enlarge the field of available supply are offset and neutralized by tendencies to restrict it. Popular sentiment demands its restrictions while the high intelligence of the population and the extension of technical schools tends to enlarge. Who can predict for the investor the resultant of these forces?

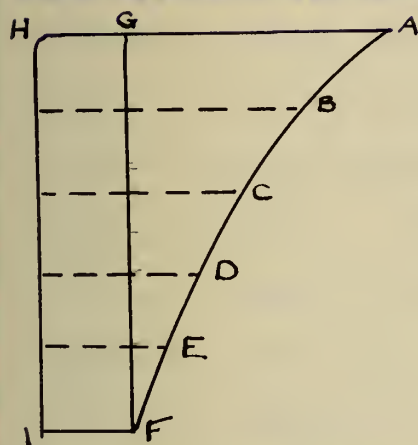
Railroad labor does not all demand the above qualifications. Indeed, the larger part of it does not, but all require them to a greater or less degree. As it requires them to a greater or less degree, to just that degree will the available supply tend to approach the open national supply and to just that extent will the wages paid deviate from the average market price.

An automatic check to this increase in wages is in existence. The residual portion of the utility values after all wages are paid represents what Professor Clarke calls interest. It represents the return to the capital invested in an expensive line, costly terminal facilities and high-priced equipment; the return of the element of rent accruing to the road because of its monopolistic position; the return to the road because of the differential skill of its management and general superintendence which afford the road profits from the differential efficiency of its systems of checks on expenditures and of comparative costs which afford it a differential advantage in expenditures; and from all other sources of profit which have not been especially enumerated.

We may for purposes of theory assume that the quantity

of labor be uniformly fixed. Labor alone cannot make a railroad.

It must have some capital and the more capital given it up to a certain degree, the more will the railroad approach our present roads in character. The first unit



of capital added allows the railroad to be run and the return which it may demand as interest may then be measured by the earnings it produces. As each added increment is added, the road is operated more and more efficiently but for the addition of equal increments, net

earnings will be increased in proportion and the added increment cannot demand more than the increase due to its own addition.

Thus, the successive increments of ABCDE and F may be added. F the last increment cannot demand more than the actual increase caused by it, which is measured by IF. Increments are added till the last increment returns a benefit not in excess of the cost of obtaining the capital in the open market. The IF fixes the interest that may be paid for all capital, for should A or B demand more interest than IF, F will be substituted and F's place will be taken by capital from the available supply. Current interest rates in the world's market fluctuate as the last benefit derived from the addition of the last increment to the world's average user of capital. FGA represents the residual portion going to labor as wages. Then as both interest and wages bear a residual relation to each other, the portions of gross earnings going to them should effect an economic balance. This result is brought about because of the fact that capital and labor may

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be substituted for one another to a certain extent. Capital embodied in tools of service operated by labor produce the work. The aim of the railroads is to produce this work at the least cost. Now if interest rates are low while wages are high relatively, tools embodying relatively large investments will be operated by a relatively small amount of labor in order that a less cost will accrue to the railroads than if the work was produced by relatively smaller embodiments of capital operated by a larger amount of labor. Then with the great increase in labor costs of the past years and the constant lowering of interest rates, we expect to find tools embodying greater amounts of capital.

During 1900 the increase of railroad capital amounted to \$457,000,000.00. 4,051 miles of new road was constructed costing approximately \$120,000,000.00. The remaining \$337,000,000 was expended in improving the roads already built. It was an embodiment of capital in forms which would afford work by means of a smaller relative portion of labor, and this was not an exceptional year. During that year crop returns were at points close to their average for the ten years, industry was depressed for bank clearings were of lessened amount, 13,840 business failures occurred, an unusual number, and stock exchange transactions halted in their upward tendency. True, gross earnings of railroads were high but they were only 61% of the returns for the last two years.

Let us observe the effect of this capital embodiment. Freight trains, the units of the greater part of railroad service, required in 1890 the same amount of labor as in 1900; one engineer, one fireman, one conductor, two brakemen and one flagman. But the average load of paying freight in 1890 was 175

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tons whereas in 1900 it was 275 tons. True, the loading of the trains was due to the increased efficiency of the managements but the ability of the train to carry the greatly increased load, to perform the increased work was due to the embodiment of capital in forms affording greater efficiency not to labor for we have seen that that remains constant.

The physical forms taken by this expenditure may be instanced by a few examples. Whereas in 1865 the standard locomotive weighed 90,000 pounds in 1895 it had increased to 150,000 pounds and in 1900 to 250,000 pounds. In 1893, the capacity of the average freight car was 27,032 pounds in 1903 it was 40,303 pounds. During 1903 the average capacity of new freight cars installed was 72,666 pounds. In proportion as the train load increased, the wear and strain upon the road-bed increased and it had to be improved and strengthened. Greater terminal facilities had to be erected to handle the traffic and so we might enumerate the methods of expenditures which have resulted in eliminating labor altogether. Thus, elevation has rendered flagmen unnecessary, interlocking switches have been doing away with switchmen, et cetera.

If the railroad industry was exempt from the friction due to dynamic change, the competing factors of labor and capital would cost exactly the same for an equal quantity of work which each was able to accomplish. But managements cannot exactly tell when they are paying relatively more for their labor than for their capital. We have seen how the residual portion of wages goes to interest, rent, differential superintendence, insurance and profit. It is impossible for managements to as-

1. The first step in the process of the investigation is the identification of the problem. This is done by the investigator who is assigned to the case. The investigator must first determine the nature of the problem and the scope of the investigation. This is done by reviewing the available information and by conducting interviews with the relevant parties. The investigator must also determine the objectives of the investigation and the methods to be used to achieve these objectives. Once the problem has been identified and the objectives and methods have been determined, the investigator can proceed to the next step in the process, which is the collection of evidence. This is done by gathering all the relevant information and documents and by conducting interviews with the relevant parties. The investigator must also ensure that the evidence is collected in a manner that is consistent with the principles of the investigation. Once the evidence has been collected, the investigator can proceed to the next step in the process, which is the analysis of the evidence. This is done by reviewing the evidence and by conducting interviews with the relevant parties. The investigator must also ensure that the evidence is analyzed in a manner that is consistent with the principles of the investigation. Once the evidence has been analyzed, the investigator can proceed to the final step in the process, which is the preparation of the report. This is done by summarizing the findings of the investigation and by providing recommendations for the future. The investigator must also ensure that the report is prepared in a manner that is consistent with the principles of the investigation.

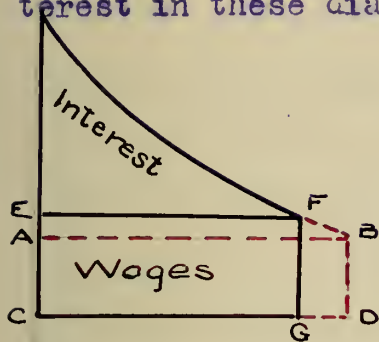
The object of the present study is to determine the effect of the various factors mentioned above on the growth of the various species of the genus *Salmonella*. The results of the study are given in the following tables.

It is a common mistake to think that the only way to get a good education is to go to a good school. In fact, the quality of the education is determined by the quality of the teachers and the quality of the curriculum. A good teacher is one who is passionate about their subject and who is able to inspire their students. A good curriculum is one that is challenging and relevant to the world in which we live. So, if you want a good education, you need to find a good teacher and a good curriculum. This is not always easy, but it is worth the effort. A good education can change your life and help you achieve your dreams.

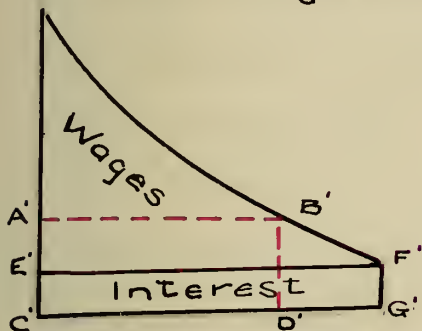
certain exactly whether the residual share is sufficient to recompense all these elements and to recompense them according to their true demands. Moreover, of labor and capital investment, labor is by far the most elastic factor. We have seen how subject to depressions railroads are, how expenditures vary in a much greater proportion than gross earnings as the attempt is made to make net earnings a constant quantity. Interest is the reward for capital which is invested permanently and which can only be freed by a forced sale which would result in a sacrifice of a great part of the capital. Labor on the other hand can be increased and decreased as exigencies demand. The laborer runs the risk of demand for his employment. Therefore, the management must feel very sure that an increased expenditure will remain permanent in amount before it will dare to assume permanent obligations.

Thus, we find in the United States that the rate of wages is much higher than the rate of interest justifies. The complex nature of railroading has enabled wages to steal away portions of gross earnings which properly belonged to rent, differential wages, of superintendence, insurance and profit. The managements suspected that this was being done but, until James J. Hill in 1897, instituted a new regime in accounting and the presentment of statistics, they had no means of assuring themselves that this actual state existed. Moreover the expansion of traffic and earnings since the depression closing in 1895 has been so unprecedented that railroads did not dare to believe that it would be permanent. Expenditures, therefore, were increased in the elastic element wages.

We may represent the present position of wages and interest in these diagrams:



ABDC and A'B'D'C' represent the true economic proportions of expenditures which should go to wages and interest but dynamic change and friction have resulted in the actual distribution assuming the proportions represented by EFGC and E'F'G'C'. With better systems of accounting and more general recognition of the permanence of our accounting, friction will tend to become eliminated and EFGC will



approach ABCD as a limit.

If under normal conditions, the portions of wages and interest become fixed at ABCD and A'B'C'D' when depression occurs and expenditures are lessened, wages being the elastic element will be decreased and will assume the abnormally low proportion. The nearer EFGC approaches ABCD the more extensive and more frequent will be the contractions of wages to an amount less than their economic position. There is an economic limit to the extent to which profits may encroach upon wages.

Laborers stand in a differential relation to one another. Some have high standards of living and large families to maintain. Others have low standards of living and no family to sustain. Thus a series of workmen may be represented as follows:

ABCD and E represent laborers with various costs of living and hence of prices at which they are willing to work.

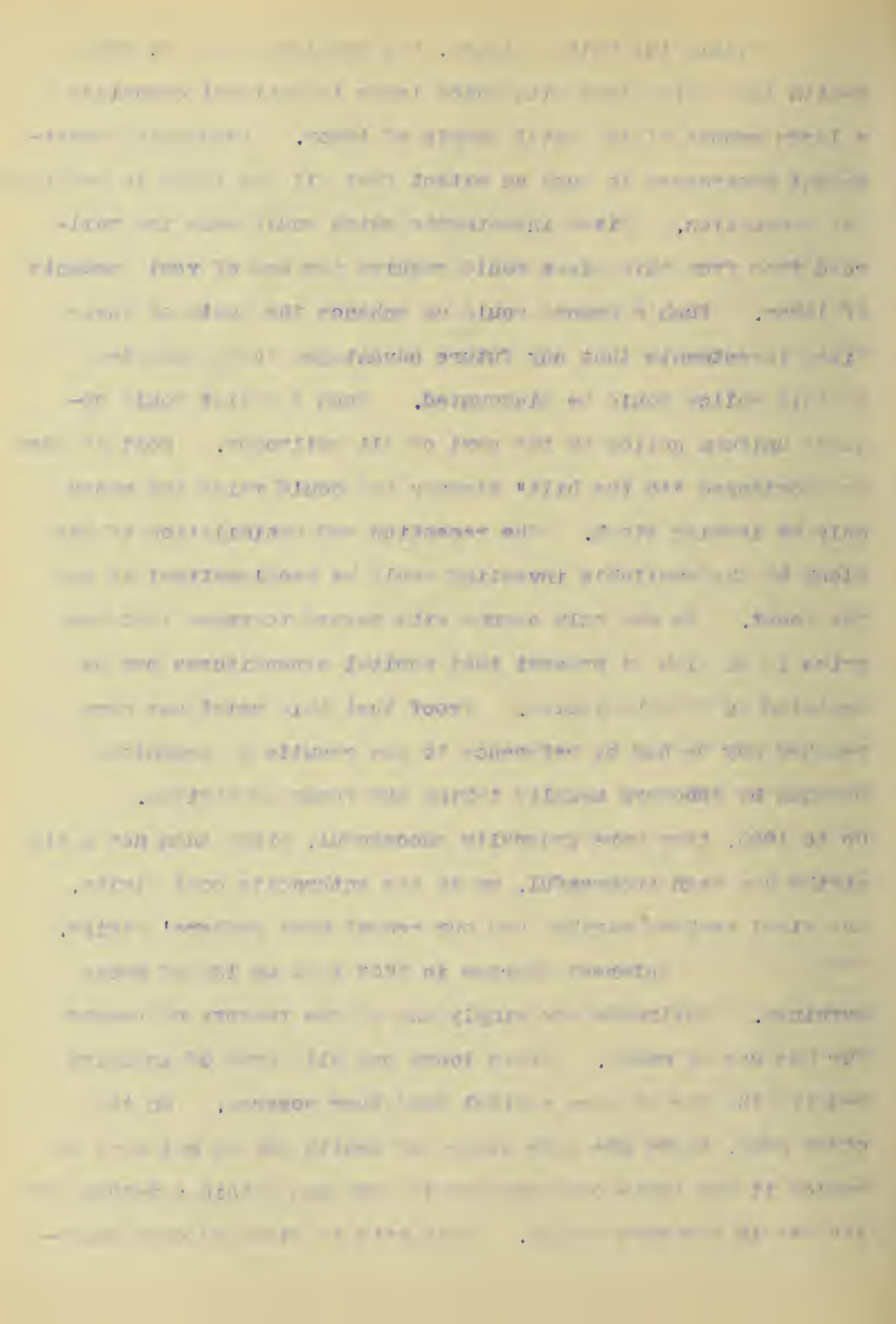
Should all laborers be required by industry A will fix the price of wages. As the quantity decreases the price will be respectively placed at BCD, or E. Thus, should the price be fixed at C, D and E gain a differential profit on their labor. But A and B finding that they cannot obtain work at their price, must accept the price C. Employers then finding that they can obtain more than enough labor at C reduce the price to D when AB and C will be forced to work at a loss. Again the supply exceeds the demand and the price tends to become fixed at E, the marginal man with no family and a low cost of living. But ABC and D will be working at starvation rates. They can support no families and the future supply of labor will be diminished not increased as the expansion of industry will demand. It will result in future higher wages but beyond the lifetime of the present management and investors and this result has little weight with them. It will, however, lower their present efficiency and the managements will care to raise wages just enough to prevent this.

At the present time the demand for labor has been in excess of supply. That portion of population which has independent means but which will work if the compensation is a great enough inducement has been required for the operation of railroads. They, offering at a price in excess of A, have fixed the price and the railroads have been forced to pay A,B,C,D and E great differential wages over the price ^{for which} they have been willing to work. As soon as the managements, by increasing capital investment, can avoid requiring this class who do not have to work, the rates will tend to be fixed by the marginal man and expenditures for wages will greatly decrease.

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Within the United States, the population has so much wealth that this class with which labor is optional comprises a large amount of the total supply of labor. Industrial development progresses to such an extent that all the labor is required for production. Fixed investments which would make the railroad free from this class would require the use of vast amounts of labor. Such a demand would so enhance the costs of these fixed investments that any future advantages to be expected by this policy would be discounted. Such a policy would require uniform action on the part of all railroads. Most of them are mortgaged "to the hilt" already and could raise the money only by issuing stock. The reception and assimilation of this stock by the available investing would be problematical to say the least. We may only assume with regard to wages that the price is so high at present that capital expenditures may be expected to be substituted. Proof that this point has been reached may be had by reference to the results of organized demands by laborers usually taking the forms of strikes. Up to 1900, they were generally successful, since then not a big strike has been successful, as in the anthracite coal strike, the steel workers' strike and our recent meat packers' strike.

Interest charges in 1903 took up 13% of gross earnings. Railroads are simply one of the factors of demand for the use of money. State loans and all forms of industry require the use of more capital than they possess. On the other hand, there are many owners of wealth who do not care to employ it for their own purposes if they can obtain a return for its use in the open market. This rate is fixed by open compe-



tition in the open market; by competition which because of the perfection of our banking systems and of our money markets is more economically perfect than competition for any other factor of wealth.

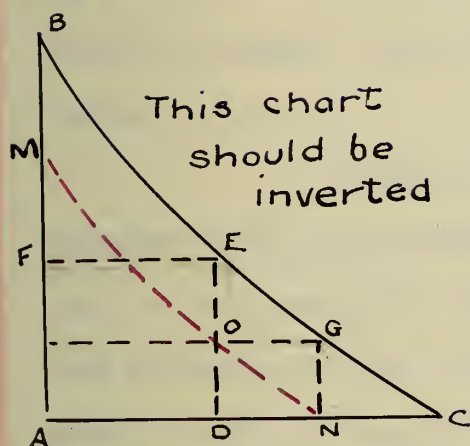
The amounts of both demand and supply are quite elastic. At any time demand can absorb various supplies at various prices, the price, of course, lowering as the amount of capital to be loaned increases. Supply in general may be classified as follows:

The moment that interest is offered for the use of capital, a motive is introduced for accumulation and the amount of this fund is directly affected by the height of the rate of interest. Wage earners are attracted by the possibility of obtaining an income separate from their salaries. The larger part of the fund comes from independent producers. Where before, producers saw no method of increasing their incomes extensively, they may now procure a constantly increasing income by running their plants to their fullest capacities, making a profit which before did not give them a compensation for the added trouble of so running their plant.

At any time there is a certain portion of accumulated capital which will be saved regardless of interest rates, partly from qualities of covetousness or of frugality or from sheer inability of income receivers to spend their annual increase of wealth. This applies to accumulations by misers, by laborers or employers who put by money for a rainy day, to accumulations by men drawing high salaries who have no desire to raise their standards of life much higher, who do not wish to

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dissipate, and who are too busy earning the salary to find time to spend it in recreation. A constantly larger part of this class are the owners of large fortunes whose income could only be spent by wastefulness and dissipation, requiring methods of expenditure antagonistic to the principles of the owners. This class accumulated then regardless of rates, but, nevertheless, as a matter of business the owners will put the money out at interest.



Thus allowing AB to represent the rates of interest which demand will pay for for quantities AE, then the line BC represents the respective amounts which will be absorbed at II rates on AB.

AD represents the capital accumulated regardless of inducement. Demand would

pay for it the corresponding rate for such a quantity on BC, IEF. But the minute F rate is paid, AD, the amount of supply, is increased. E will then be lowered as the quantity increases till the point is reached where the drop in rates is low enough to cause a total absorption of capital equal to that by demand which can be induced at that price, i.e. G. The influx of this optional saving lowers the rate out of all proportion to the increase in the quantity of saving.

Now if we consider the present low interest rates and the constant downward tendency in the past, we ask will it not rise with demand if all industry with railroads funds that great savings in wages result from a substitution of capital for labor? Let the present marginal productivity be MN and the present rate

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be 0. Then as further wants cause an increased demand MN tends to take position BC and the marginal utility of the present tends to be E representing a proportionate change in rates which would seriously increase expenditures for interest but induced savings would increase capital causing the real increase in marginal productivity to be considerably below E. Such a slight raise in rates would result from an increased marginal productivity that the added cost to industry of using capital to supersede labor would be slight compared with the savings that would result from wages.

Railroads are but a small division of industry. Manufacturing represents an equal portion of the countries wealth and is the industry from which would, I believe, come the greatest portion of that increase of elastic capital induced into the money market by higher rates. In the past, manufacturing on a sound basis has furnished earnings so high that no superior inducement could be offered than to reinvest them in the business. Now under a watered or highly competitive basis manufacturing investment is more precarious and does not offer the inducements for reinvestment of the earnings which amount up as before but are distributed over a greater face value. Earnings reinvested would have to be distributed over this expanded face value and would come back greatly diluted. One reference may suffice to call to mind the increased face value. Combinations have been effected in almost every branch of manufacturing. Almost no combinations have been effected where the stock of the absorbing company is not double the previous stock of its component companies. One absorbing company, the United States Shipbuilding

It is noted that the above figures are based on the assumption that the savings rate will be 10% of the gross income. This is a reasonable assumption for the purpose of this study. The actual savings rate may be higher or lower, depending on the individual's circumstances. The figures are presented for information only and should not be used as a basis for financial planning.

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Company, expands the securities of its component companies 500%. These earnings will then prove a highly elastic element of supply when the demands of railroads will increase the marginal productivity of loans.

The broader our market the more will a demand by American railroads tend to be discounted. Since 1898 our purchases of foreign bonds have resulted in the expansion of a national money market to that of the world. Railroads have risen from their discredited position of 1870-1880. Now the bonds of our best railroads are sold to better advantage than those of any other form of industry. They are generally accepted by the financial world as second only in stability to national bonds. Any advance in our railroad bonds will result in such an extensive and strong demand that the railroads may raise immense sums with but slightly greater raise in rates. We may expect but slight increase then in the rates paid by our standard roads and a decrease in the rates paid by others as they increase in stability and earning power till the public comes to accept their bonds on a parity with those of the standard roads.

We have seen that our railroads need increasing amounts of capital, but there are two ways of obtaining this capital- by selling bonds and by selling stock. Our railroads tend to increase stock in proportion to bonds. In 1890, 46.73% of funded capital was stock; in 1900 50.87%. Our railroads have been transformed from instable experiments whose policies were to profit to the utmost from monopolistic positions, to lose as little in competitive traffic as possible, and to earn the largest possible amount. These earnings were either exploited by a

community, against the possibility of the community becoming a
These matters will then prove a bitter battle of wills.
by which the hands of the people will be turned the other way.
Question of force.

The broader our outlook the more will it be to the benefit of the world.

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parasitical management or distributed to stockholders in inordinate stock dividends. Their natural policy was to confine the spoils to the smallest possible number and to raise necessary funds by bonds. The railroad of today, on the contrary, tends to be a normal integrated unit of production, owned by the people, and considered by the management as an entity entirely independent of the stockholders. As the road developed, efficiency replaced monopolistic position as the basis of earnings. Efficiency is a possession common to all railroads, monopolistic position a differential possession accruing to the direct benefit of the stockholders. Formerly almost all earnings were paid out in dividends, now, in 1903, but 57%. With the loss of control of the road, with the tendency to lose his integral share in whatever the monopolistic position of the road is worth, the stockholder found that the increase in value of his stock on account of paying the same dividends while the money rates gradually lowered was more than offset by the loss in the real value of the stock.

The result has been that authorization for increased capital has taken the form of an issue of stock. The stock represented a value whose maximum existed at the time of issue, whereas bonds represent^{ed}~~ing~~ an increasing value. The companies profited in an issue of stock by selling at the highest point it would ever reach. Thus, should Pennsylvania in an issue of ten blocks of stock depress the price five points, she would sell all the way down and at the finish would have sold them for $2\frac{1}{2}$ points above her market value. The stock would be selling at a point nearer its real value and the investing public would simply be milked of the $2\frac{1}{2}$ points.

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Railroads paying instable dividends have had the value of their stock underrated. Increasing earnings have allowed increased dividends, so that the market prices have been enhanced. Issues of stock would simply distribute this gain pro rata among outside investors. So they have issued bonds unless that item already amounted to an insolvency charge. When weak roads have been unable to issue bonds at par, combination has resulted in a tendency of larger roads to guarantee the bonds of the weaker.

Summarizing, price of loans tends to lower and is so stable that it will withstand almost any demand on the parts of the railroads. The amount of loans will increase greatly but every proportionate increase on the expenditure sheet should be offset by a greater corresponding decrease on the part of wages.

The term rentals upon the operation sheet of the American railroad comprises 4.51% of the total expenditures of gross earnings. Usually this expenditure is for the use of subsidiary and branch lines which bear this contractual relation to the road until it either sees fit to amalgamate them within its system or finds that the benefits derived from them are disproportionate to their cost. Sometimes the owners of the subsidiary lines do not care to amalgamate and the road can only operate the roads by renting them. At any rate, the management has purely discretionary power to vary the proportion of this amount and the stockholder may reasonably expect that no expenditure will be made on this account which will not proportionally benefit the company. Nor may we judge of these benefits for the chief value of a branch may be as a feeder or to prevent the

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incursion of competing lines.

But the term rent should denote more to the investigator than the rental of branch lines. True that is the only means of direct expenditure for rent, but we must bear in mind that although profits are the residue of expenditures, still there may be economic tendencies and laws which will effect net profits directly. Such is rent.

Rent may be considered as the return from the railroad considered as a plant or a property independent of the differential gains of management which must appear as profits.

This plant has been considered under capital, but not in regard to its earning capacity. Rent may vary with changes in any of the following factors: which compose this plant:

1. Value of property.
2. Right of eminent domain.
3. Hold on local traffic.
4. Traffic agreements.
5. Economics due to density and length of haul of traffic.
6. The value of the industries along its line from which it obtains its traffic.

Profits and rent may then be distinguished respectively one as the product of operation, the other as the product of the plant. The plant must have existed before transportation could be produced. Let us consider the plant with all its factors as in existence and let us apply operation in composite units. Let each of these units be just large enough, economically and efficiently, to operate one unit of service which because of the two divisions of service must be complex in its nature. We

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must consider the inelastic divisions of operation as terminal service, superintendence and maintenance as distributed pro rata among these composite units of operation. In short, these composite units are a pro rata division of operation costs among composite units of service. Applying this unit of operation, transportation will be produced affording the railroad a revenue charged at ordinary rate equal to, say 100, all due to operation. When we apply a second unit, it will produce a relatively smaller amount of earnings, for the road will have been able to obtain more for the first unit than the second. The first unit handled very high class of goods which could stand the highest tariff because of their inherent composition and because of the urgency of the shipment. This urgency was due the monopolistic position which every road possesses. The second unit of operation will handle lower class freight for which there is less need of urgency. The passengers handled will be those buying the highest price tickets now issued by railroads and who will pay the higher rates now charged for speed and service. The second unit will handle less urgent and lower class traffic and will produce a smaller revenue to pay 80. The third unit of operation takes still lower class traffic which produces a still lower addition to gross earnings of 60. We may thus tabulate our results as below:

[illegible]

Units of Oper.	Revenue	Returns from Oper.	Rent
1	100	60 100	—
2	180	80 160	20
3	240	60 180	60
4	280	160 -100	120
5	300	100	200

No one unit of operation can be said to return more to operation than any other, so the increase in revenue from the last unit applied fixes the return from operation. That which remains goes to the road as rent. Rent then will be seen to increase much faster in proportion to the number of units added. Let us assume that units of operation

cost 40; now if five units are added the returns to operation will be 100, its cost being 200, the loss will be 100. The net returns to operation may be reckoned as 60, 80, 60 0, and -100 respectively. The total gain to the railroad for operation and plant will be the sum of the net returns on operation and the rent.

The economic point of greatest marginal utility in the application of units of operation is at the point where this sum is highest. The costs entering into plant such as interest and insurance, do not vary as the units of operation applied to any appreciable amount; so the marginal utility is found irrespective of them and the greatest net income of the road will be found by deducting these costs. But the plant value may be increased and its capacity for rent enlarged. We have seen how capital is substituted for labor. From this point of view, it is virtually a substitution of plant for operation for, by the addition of capital, one unit of operation will produce greater gross earnings. This they may do by increasing

...the total cost of the operation and the

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The data were the capital is substituted for labor. From this point of view, it is virtually a substitution of capital for labor, by the addition of capital, and not of capital for labor.

the capacity of the service-unit: the train, by enlarging capacity of locomotives and cars. Thus, the first unit may be considered to produce 120 and the following table will occur:

Units of Oper.	Revenue	Returns from Oper.	Rent
1	120	80 120	—
2	216	112 192	24
3	288	96 216	72
4	336	32 192	144
5	360	-80 120	240

The point of maximum utility will have to be found anew as for a new road. The fourth unit returning 176 will represent this. Now has it paid to increase the investment in the road? It has paid in just the proportion that the new maximum utilization point less the added costs involved exceeds the

previous maximum utilization and further investments in plant will be made as long as such an excess results. However, the total rent producing value of the plant does not vary as the capital investment increases. It changes in a constantly decreasing ratio. Investment simply enhances the value of the property. This value consists of the value of realty which tends to increase regardless and independently of capital investment. But new investment simply utilizes to a greater extent the road's former realty and the money thus expended will thus vary this element of rent producing value in an increasing ratio. Right to eminent domain and traffic agreements may also be said to obtain fuller utilization through increased capitalization of property without requiring a proportionate outlay of capital. But the lever of rent value, hold on local traffic, density and length of haul and value of dependent industries increase in value independently of capital investment. Without their increase the harmonious

the capacity of the service-unit; the third, the assignment of personnel to the various units; the fourth, the assignment of personnel to the various units; the fifth, the assignment of personnel to the various units.

The point of maximum density will have to be found more or less by trial and error. The number of specimens will be determined by the results of the trial and error. It has been found that the number of specimens should be at least 100. It has been found that the number of specimens should be at least 100. It has been found that the number of specimens should be at least 100.

and value of separate industries increases in value proportionally
of their value, held on local traffic, density and amount of
resulting a proportionate outlay of capital. But the level
utilization through increased capitalization of property which
results in better agreements may also be said to create value
and return value in an increasing ratio. It is to be noted
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investment simply allows to a greater extent the traffic
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value owners of the value of traffic each leads to increase
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increased income. It appears in a community distribution of
the total productive value of the plant does not vary in the slightest
will be made on long as such an excess results. However, the in-
crease in traffic and further investments in plant

rent producing plant becomes discordant. Since a parallel increase on their part is necessary, they regulate absolutely the rapidity which capital investment increased.

Railroads may now be divided into two classes:

I. Those whose capitalistic investment is out of proportion to the inelastic elements of rent producing value. Such roads represent injudicious investment and their present net incomes are far from their greatest marginal utility. In America, the inelastic elements increase at an extraordinary rate as shown by our extraordinary rate of increase of population, of industrial development, and of traffic. When capital investment is increased, a large part of the increase is wasted on tearing down the old road and then rebuilding so that the real value of construction is much less than actual cost. Much of our disproportionate capital investment is simply an anticipation of the time when the other elements will increase to accordant proportions. This state of affairs is rapidly coming about with our great national development. The investing public invariably underestimate this future potential earning power and present ruling prices of these securities therefore offer excellent opportunities for judicious investment. As examples of this class, Atchison and Southern may be mentioned.

II. The second class of railroads consists of those whose maximum utility has been reached and whose inelastic elements of rent value increase but slowly. These roads will not soon require increased capitalistic investment and their net incomes therefor tend to permanency. Such roads are at present probably estimated at more than their true value for the public

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besides placing a valuation upon its' known earning power have overvalued the potential earning power of such roads. We find the New York, New Haven and Hartford the best example of this class.

III. The third class consists of roads whose maximum utilities, as expressed in net income, have been reached, and whose inelastic elements of rent value are increasing so fast that further investments of capital are being required. This causes a constant enhancing of the road's marginal utility shared in by the new investors. The moderate value of potential dividends seems to have been quite correctly estimated with these railroads and so present market values probably represent the stock's true value. This value will increase in proportion to the development of the country. Examples of this class are the Northwestern and the Illinois Central.

IV. The fourth class embraces the ideal American railroads. Their managements have assumed positions independent of controlling syndicates. They realize the road's independent position as a legal entity and operate the road for its' own true welfare. Such roads have reached their maximum utility, rapid increase of the inelastic elements of rent value demands increased capitalistic investment offset by increased marginal utility, but, in addition, they require integration for their own good. This will mean the expansion of the road from a mere transportation unit to a composite unit of transportation, manufacture and mining. The marginal utility of the whole unit will be the weighted average of the separate parts. Transportation will afford a greater utility than either of the others

171. The above stated results of the above work have been discussed in the preceding chapters. It is to be noted that the above results are in good agreement with the results obtained by other workers in the field of the study of the properties of the above material.

1. The first of these elements is the fact that the...
2. The second element is the fact that the...
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6. The sixth element is the fact that the...
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9. The ninth element is the fact that the...
10. The tenth element is the fact that the...

for ^{the} road has, by prior entry, assumed a differential position in transportation which it will never succeed in taking in the recent initiation in the industries of mining and manufacture. With this lowering of average marginal net income, the earning power of the road per unit of capital invested will tend to diminish. The reaction of this on prices will cause a similar gradual reduction antagonistic to the interests of the stockholder. Such stocks, of course, offer small inducement to the investor. The leading example of this class is Pennsylvania.

V. The fifth class represents roads which have reached the stage described in the fourth class but whose stock is controlled by syndicates. The managements depending for their position upon the stockholders, will adopt no policy that will result in a decreased marginal utility per unit of capital embodied in the railroad. Economic tendencies, however, are gradually forcing integration and so this policy will be gradually compelled, causing a future drop in market price of stock. New York Central may be cited to illustrate this class.

The wages of superintendence have been classed ^{labor} under wages as the highest class of ^{labor} employed by the railroads. In this industry, more clearly than any other, are the differential gains or leavings comprising profit separate and distinct from wages of superintendence, for profit goes to one set of persons, the stockholders, at the discretion of the board, and wages of superintendence are paid directly to the management and are supposed to be their sole remuneration for service. They are regulated like any other kind of wages but with this exception. The road commonly receives a greater differential gain or loss

of the company, and the company is not a party to the transaction. The company is not a party to the transaction, and the company is not a party to the transaction.

1. The first step in the process of the investigation is to determine the scope of the problem. This is done by identifying the areas of the organization that are affected by the problem and the extent of the problem. The next step is to gather information about the problem. This is done by interviewing the people who are involved in the problem and by reviewing the records of the organization. The third step is to analyze the information that has been gathered. This is done by identifying the causes of the problem and by determining the best way to solve the problem. The final step is to implement the solution. This is done by putting the solution into practice and by monitoring the results.

[illegible]

from their services. Slight variations in differential ability applied to our vast railroad systems and their immense earnings will produce greater variations in net income than salaries indicate. An improvement in net income from differential ability cannot be traced to the particular superintendent to whom it is due. Our accounting systems are such that the increase can be traced to the department from whence it comes and thus gains are usually credited to the heads of the departments. The real work is often done by lower officials and, except in the best railroads, the high salaried positions are liable to be secured by "pull" not ability. Certain abilities require certain environments for the best results and a general appreciation of that fact causes lethargy in the free competitive market for superintendence.

As the supply of superintendence increases, the marginal utility of it decreases. Our rising intelligence, technical schools, correspondence schools et cetera, tend to increase the supply disproportionately to demands. At the same time, the demand is lessened as the management of roads are systematized and tend to become automatic. This result is to be noted in any business. A great deal more managerial ability is required to develop the business and put it in efficient working order than to carry it on after its trade is established and its operation systematized. Competitive systems of accounting aid this tendency toward an automaton. This, with a decrease in demand and an increase in supply, a readjustment must occur which the railroads may take advantage of either by hiring more efficient superintendence at the old price or by maintaining

There is no doubt that the Government has a right to regulate the business of the country in such a manner as to secure the most efficient and economical use of its resources. It is the duty of the Government to see that the public interest is protected and that the rights of the citizen are not infringed. The Government should not be swayed by the interests of a few individuals or corporations, but should act for the benefit of the whole people. It should encourage the development of the country and the improvement of the living conditions of its citizens. The Government should also see that the laws are enforced and that justice is done to all. In short, the Government should be the guardian of the public interest and the promoter of the general welfare.

present standards at a lower cost.

Insurance comprises a very small part of expenditure, for a railroad is of such a nature that it may safely carry its own insurance. We have seen how economic insurance for net income is effected by variations of maintenance charges. Applied to insurance of dividends this fund is aided by the fact that railroads seldom pay all net income out in dividends. In times of economic stress they make that portion not paid out in dividends stand the loss in net income thus, insuring stability of dividends.

Physically railroads are of such an extended nature that disaster can fall on but a portion at a time. The roads are thus in such a position that they can carry their own insurance for they need fear no loss which will result in a shrunken credit and crippled business. Insurance can thus be effected by funds and reserves which will allow savings to roads equal to the loadings which the premiums would receive if the insurance was carried by an outside company.

The charts were made to show expenditures and their effect upon gross earnings have been "Gross Expenses per Mile of Line," and "Net Earnings per Mile of Line." The first shows the comparative aggregate expenditures as built up through the operation of the laws previously stated. From this chart we perceive the actual effect of general variations of the elements of cost which effect all railroads and the degree which all railroads are effected. The policy of varying gross expenditures so as to neutralize a loss or gain in gross earnings and thus produce a favorable showing in net earnings is here graphically illustrated.

Pennsylvania and Northern Pacific seem especially inclined toward this policy. "Net Earnings per Mile of Line" advances the investor one step farther in his endeavor to trace dividends from their conception to their declaration. He sees here gross earnings reduced by certain charges, the extent of the reduction, and the policy of the railroad in effecting the reduction. The universal policy seems to be to show a constant increase in net earnings.

For purposes of investigation, subsidiary charts giving detailed expenditure of the various roads have been prepared. Where they are incomplete, it is due to the fact that many of the roads have but recently adopted this scheme of detailing expenditures. By means of these charts, the various standards of maintenance are exposed, as also the general policy of regulating these standards so as to form economic insurance funds. Of late, railroads seem to have come to believe that these funds are replete and a smaller proportionate expenditure is being made on their account.

The following is a list of the names of the persons who have been appointed to the various committees of the National Council of the American People, for the year 1934.

But railroads differ in their ability to secure this maximum utility and the road may have secured such a differential position in ability to secure the elements of entering into this marginal utility that its net income is larger than its normal marginal utility warrants. The management of the road first attempts to find the point of greatest marginal utility. They must weigh correctly all the elements entering into rent value, a very complicated and difficult task. They must see that the units of operation are of uniform composition and are applied to the best advantage. As the management succeeds in approaching the determination of this point, so the road comes to adopt the best policy of operation and of extension.

Next roads vary as to the abilities of the managements to put these policies into operation and of extension. They have differential abilities to apply the units of operation. Some managements are able to effect a differential saving over other roads in contracting for wages, interest, insurance, and rent. The units applied vary in efficiency for the greater the purchasing power of a sum of money, the greater will be the efficiency of such an expenditure. Roads may attain this position by furnishing poor defective service to traffic which is monopolistic. They may secure by lobbying^{by} especial legislative advantages. By terrorizing competitors in the markets for these various elements of expenditures and for prices obtained for service. Thus Pennsylvania kept Wabash out of Pittsburg for years simply because Wabash was afraid to engage in the legislative tariff and expenditure wars which she knew would result from her entrance.

[illegible]

The net income of the road represents the resultant of the two abilities: that of perceiving and obtaining the greatest marginal utility and a differential ability to buy and to sell. Returning to our legal findings we see that the part of net income which goes to stockholders depends entirely upon the discretion of the board of directors, whose actions in this regard are simply expressions of the policy of the road ~~in which the~~

~~road~~. Policies vary as exigencies arise and only very general principles can be laid down. Those roads which have obtained their marginal utility and whose inelastic elements of rent value are almost stationary and that class of roads whose fixed investments represent a disproportionate value to the rest of the rent producing elements will have no immediate need for increase of capital. They then have no incentive to reserve a large portion of net income for construction and are likely to pay the greater part of it in dividends.

Those roads whose units of operation are not uniform, consisting of a disproportionate percentage of cost going to direct operation at the expense of maintenance, must make their units uniform and reestablish the standards of maintenance of the road by charges against net income going to improvement. Those roads whose inelastic elements of rent value are increasing in a faster proportion than fixed investments demand, in order to place themselves in a position to obtain the greatest marginal utility, greater fixed investment. This requires the attraction of wealth possessed by the investing public. The greatest inducement to the public is by guarantee of the investment's stability and security. What greater proof can be offered than that the company has such confidence in present investment that it

[illegible]

is charging parts of net income to construction in preference to paying them out in dividends. The policy of these roads will be moderate dividends, as with Pennsylvania, New York Central, Northwestern, and Illinois Central. Illustrations of the previous class of large proportionate dividends are New York, New Haven and Hartford; Southern; Chicago, Rock Island and Pacific of late; et cetera.

We have now traced dividends, the chief benefit accruing to the investor, from their inception in the minds of the management to their declaration at the discretion of the board of directors, both from the standpoint of amount and of regularity. Our study has included the chance of a rise or a fall in value. We must now consider in order the requisites to a good investment:

1. Safety implying the liability of loss of capital invested.
2. Good and regular return.
3. Marketability,
4. Stability or progressive value.

The liability to total loss of the capital invested may be considered for all practical purposes as nil and not in existence. Railroads are of such a character that their existence as going concerns cannot be wiped out for the road expressly contracts to operate in its charter. But a portion of the road can be wiped out entirely by physical agencies at one time and the rest operates disadvantageously until the loss is made up. Legally the road cannot be wiped out. The road, as we have seen, consists of a fixed investment and a small working capital. Whenever this working capital is wiped out, interest

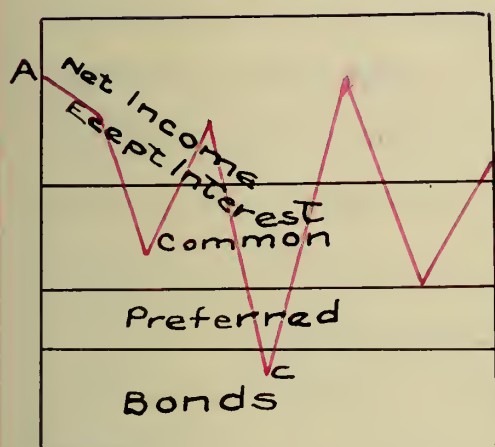
1. The first of these is the fact that the
2. of the system is not an absolute, but a relative
3. one, depending on the position of the
4. system in the world. The position of the
5. system in the world is determined by the
6. position of the system in the world. The
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18. of the system in the world. The position
19. of the system in the world is determined
20. by the position of the system in the world.

1. The first step in the process of the development of the new system is the identification of the current system and its components. This is done by conducting a thorough analysis of the existing system and its various parts. The next step is to determine the requirements for the new system, which involves identifying the needs and expectations of the users and the organization. Once the requirements are established, the next step is to design the new system, which includes creating a detailed plan for the system's architecture and components. Finally, the new system is implemented and tested to ensure it meets the requirements and functions correctly.

The following is a list of the names of the persons who have been identified as having been in contact with the subject of this investigation, and who have been identified as having been in contact with the subject of this investigation, and who have been identified as having been in contact with the subject of this investigation.

payments fail and the bondholders foreclose, but so large is the fixed investment that the sale under foreclosure invariably yields more than the accumulated debts of the company and a sum is left for pro rata distribution among the shareholders. The liability to foreclosure may be easily foreseen by investigation of the proportion of bonds to stock, by seeing whether current liabilities greatly exceed current assets, and by investigating earnings.

We may represent the condition graphically.



Let AB represent the course of net income excepting interest charges, and the parallelograms the respective charges of bonds, ^{of} preferred, and of common stock. Then at C earnings will not pay interest and the road is liable to a foreclosure unless the usual provision has been set

aside. This whole work has shown the tendency to good and regular return. This has been prepared graphically for the roads under consideration.

"Possible Dividends" represent the actual economic profits of the corporations, not those of the investor. From "Net Earnings" we have had to deduct the fixed charges of interest, taxes, rent, et cetera, and then the remainder represents which the directors can legally declare upon as dividends. The chart does not show what dividend an investor is likely to receive but if the investor is assured that it is the road's policy to pay a certain approximate dividend, he may here see the road's power in the past to declare this dividend and the tendency of

its power in the future to do so. The statistics here presented have been prepared by deducting from net earnings all fixed charges, which by their expenditure do not tend to increase the value of the property. Entries to carry net earnings to funds, improvements, et cetera, have, therefore, been deducted. "Possible Dividends" represent an underestimation for they do not include maintenance insurance funds.

It is necessary that the investor see clearly how the investing public have foreseen and allowed for the earning power of the company and the probabilities of its paying increased dividends. "Possible Net Returns on Investment" shows the return in percentage which he would receive if he bought the stock of the company in open market and if the company paid all of its profits out in dividends.

Pennsylvania shows either ignorance of earning power or great confidence in her policy to pay moderate dividends. Atchison Common's market price has kept pace with her increased earnings. New York Central, New York, New Haven and C. R. I. & P. in control of syndicates show that the public have fully discounted the natural policy to pay high dividends so that their power to pay a net to investors has remained constant.

"Dividends Paid" showing comparative rates and their tendency towards permanency fix the present value of the investment. The roads are here divided into two classes: those who pay a constant steady rate regardless of earnings, as Pennsylvania; New York, New Haven; Illinois Central; and Atchison; and those who pay as exigencies or earnings allow, as C.R.I. & P., New York Central, Northwestern, and Northern Pacific.

"Net to Investor from Dividends" is a composite chart

showing the actual percentage return on the dollar invested. The chief value is to show what stockholders have actually been getting and this compared with similar returns from other railroads. The universally descending lines show the willingness of the investing public to accept lower and lower returns, for they have been caused not because of lower dividends but by the advance of the market price of the stock. Three kinds of roads are shown: Those of reputed known stability in which stockholders have been content to receive extraordinarily low returns, as New York Central; N. Y., N. H., and of late, Illinois Central; those of low stability whose returns have been spasmodic and unlooked for, as C.R.I. & P., and Northern Pacific; and those whose stability has so increased within the last few years that the public is yet unaware of the real value of the roads, the earnings of which justify a higher market price as Southern, Atchison, et cetera. C.R.I. & P. show periods, '95-'97 and '01-'02, when their earning power and stability have been overrated.

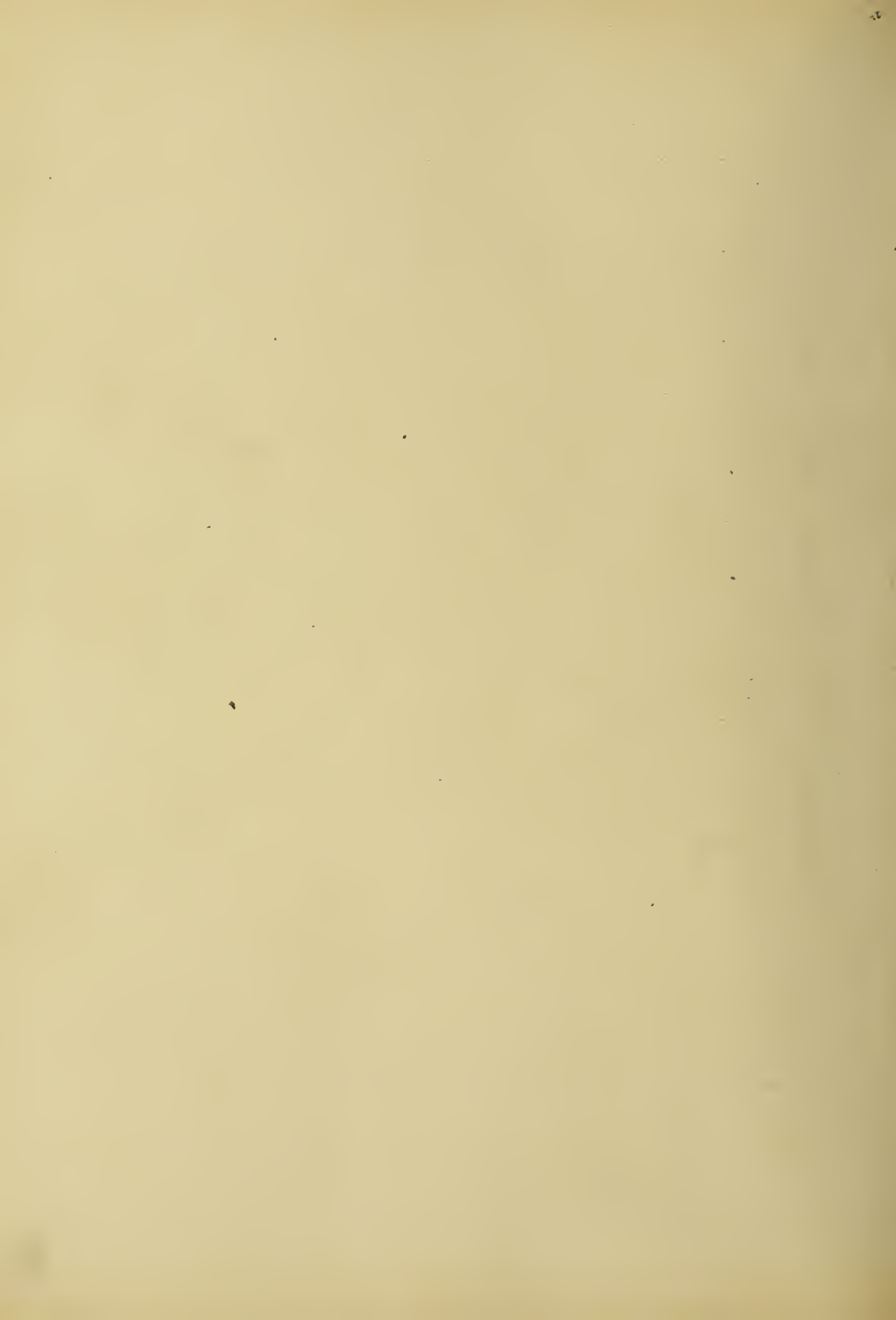
Ordinarily no fault can be found with American railroads on account of marketability of stocks. The issues are so broad and so well known that purchasers can always be found who will buy at but few points below their usual market value. "Annual Turn on Exchange" indicates the marketability of stock as shown by it's turn-over for the last ten years and also the degree in which speculation and manipulation has entered. The probable difficulty in selling stock can be easily deduced. Some roads show an appreciation by the public of the increased value of the line, as Pennsylvania, Southern; some of the passing of the stock from the hands of a controlling interest to the general public, as New York Central; some the reverse process, as Northern

Pacific and C.R.I. & P.; some little demand for the stock, as Southern; and others the constant ownership by a class of investors who do not care to sell, as N. Y., N. H. and H., and Northwestern. Atchison's extraordinary sale was caused partly by an attempt to secure control (Standard Oil was one of the chief parties attempting) but chiefly because of the increased appreciation of the true value of the road. The process accompanying a rise in stock price is for each successive holder to sell as soon as he can realize a small profit. Each holder will be afraid of an overvaluation of the stock and the usual subsequent crash.

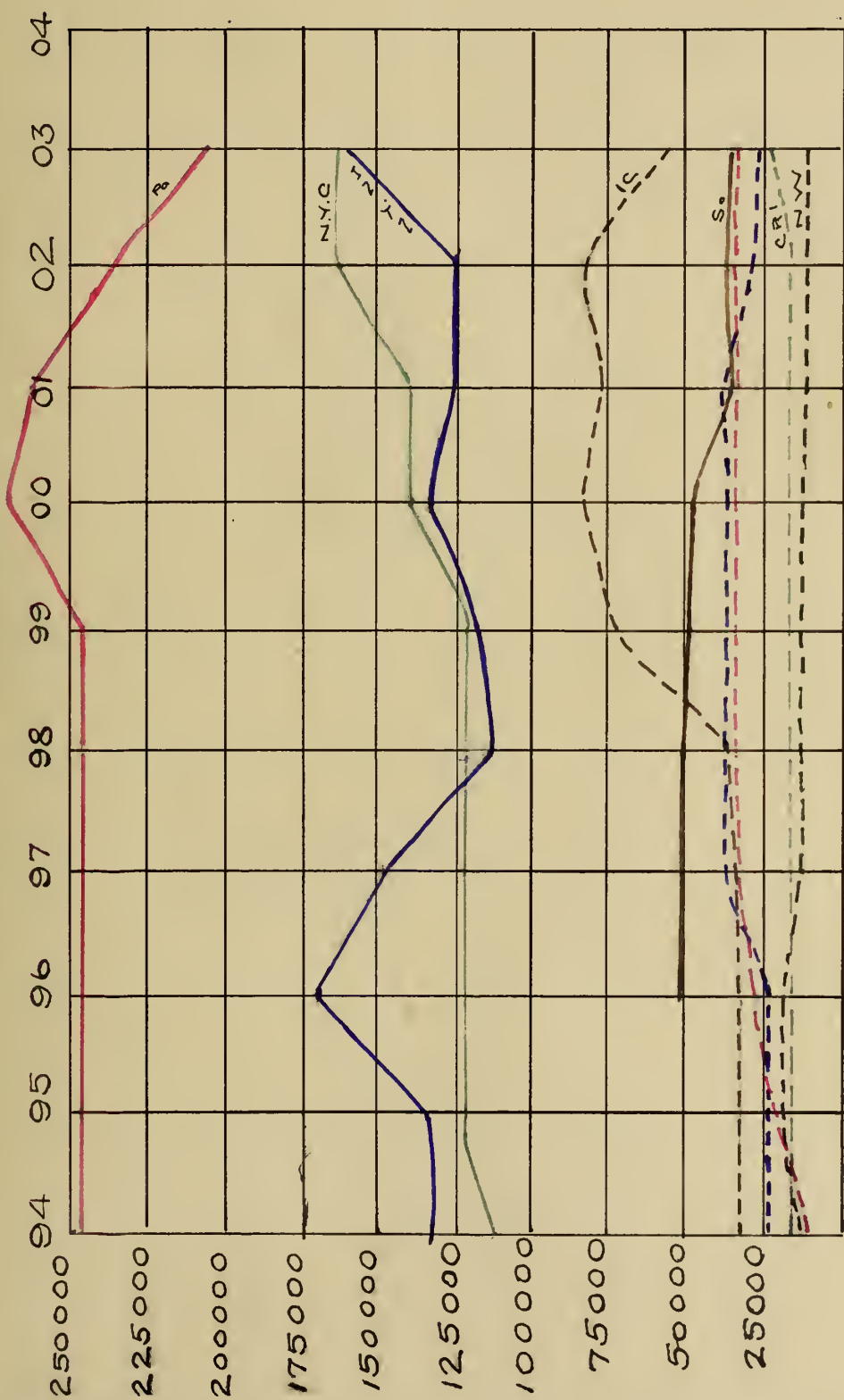
Stability or progressive value is shown by "Market Price of Stock." The prices taken by years show in but a desultory manner the tendency toward variation. A few railroads have a steady price varying with the money market of the country, as New York, New Haven and Hartford, and all roads in '02-'03, but most American roads show a steady advance parallel to the increase of the country's investment wealth and the greater earning power of the railroads. Any man investing in 1903 in any stock would be able to sell now at a profit. If he bought after a study of the companies, he would have seen that the drop was not justified by the condition of the country and was sure to react in favor of a buyer.

BONDS PER MILE OF LINE

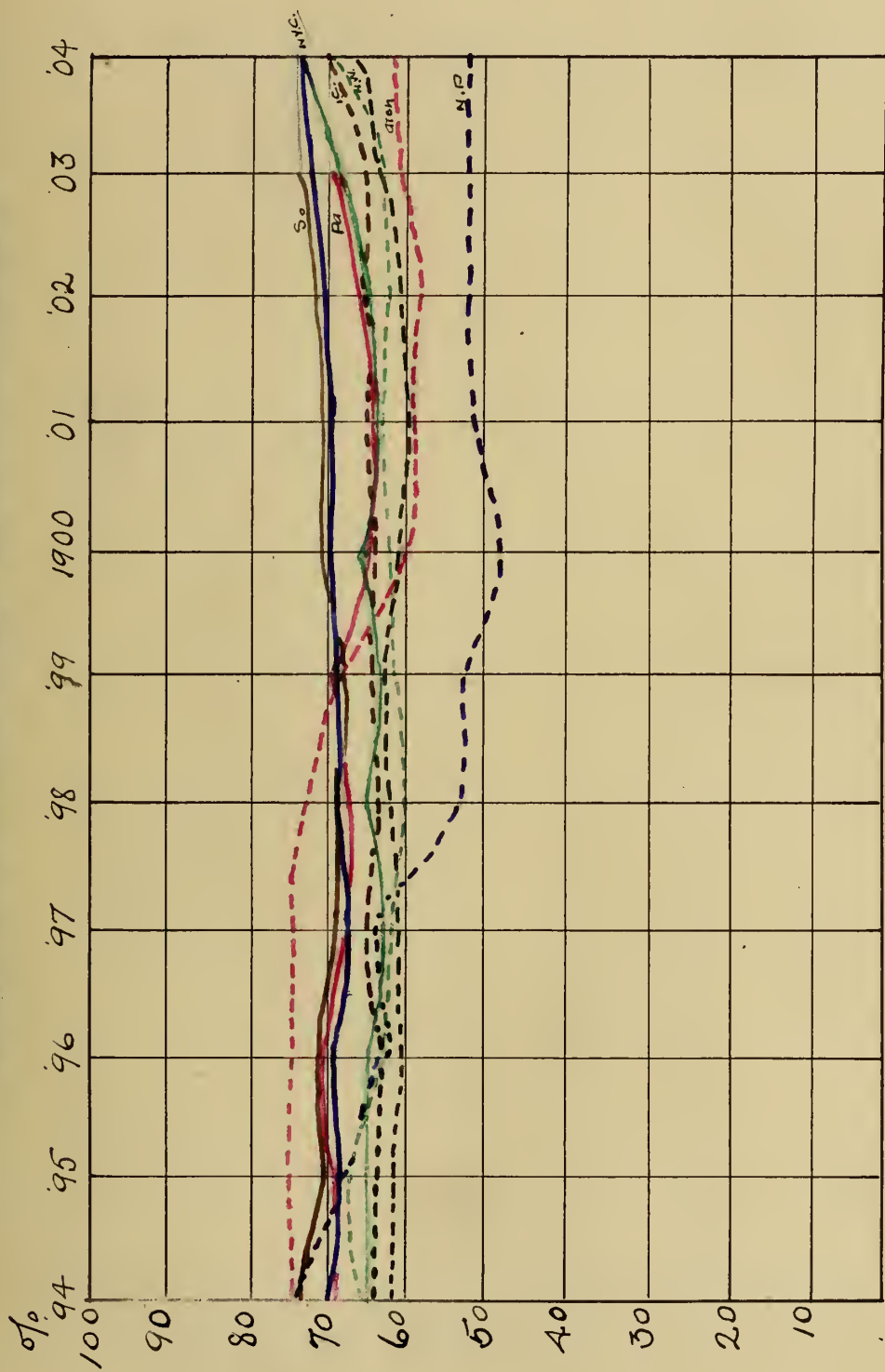




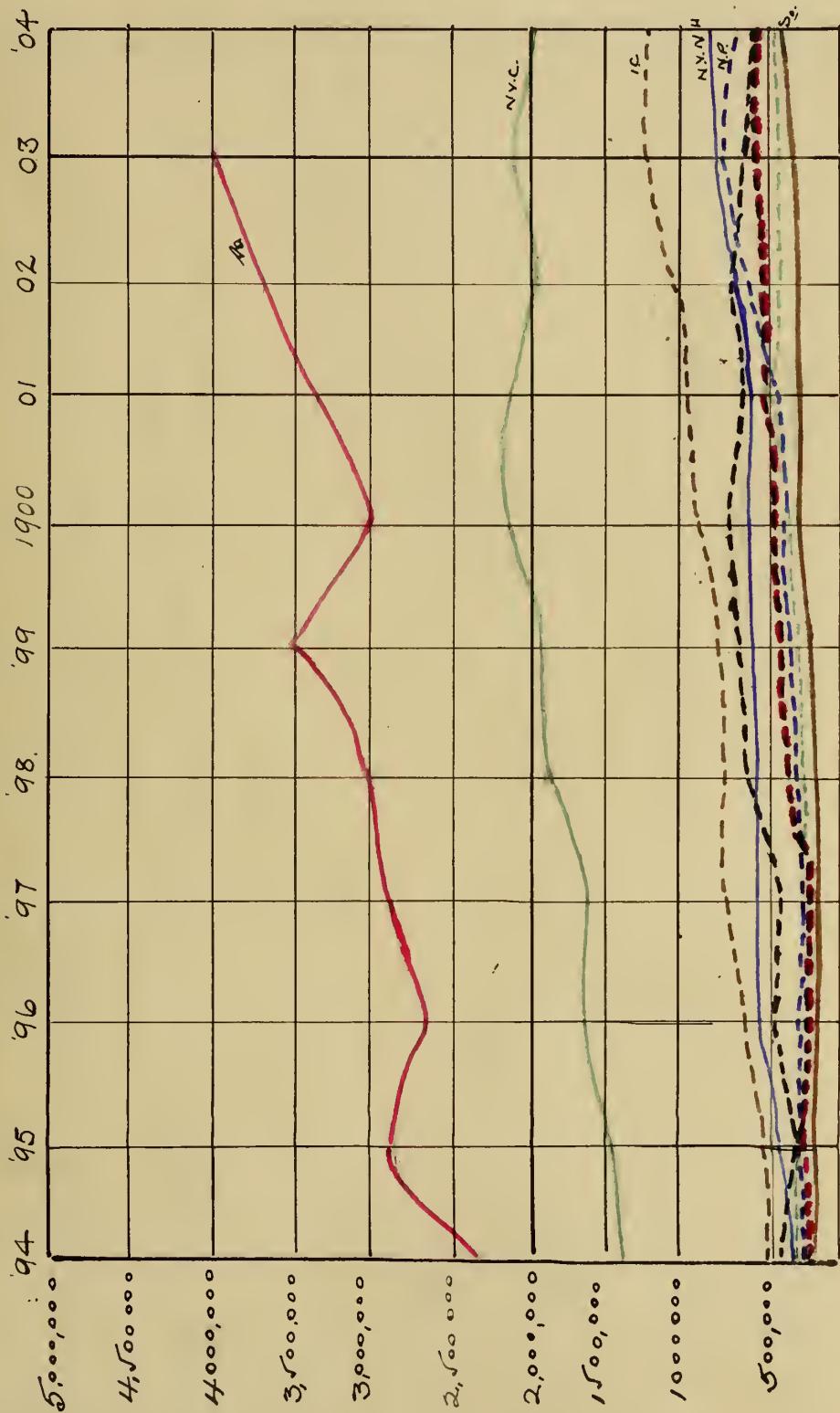
STOCK PER MILE OF LINE

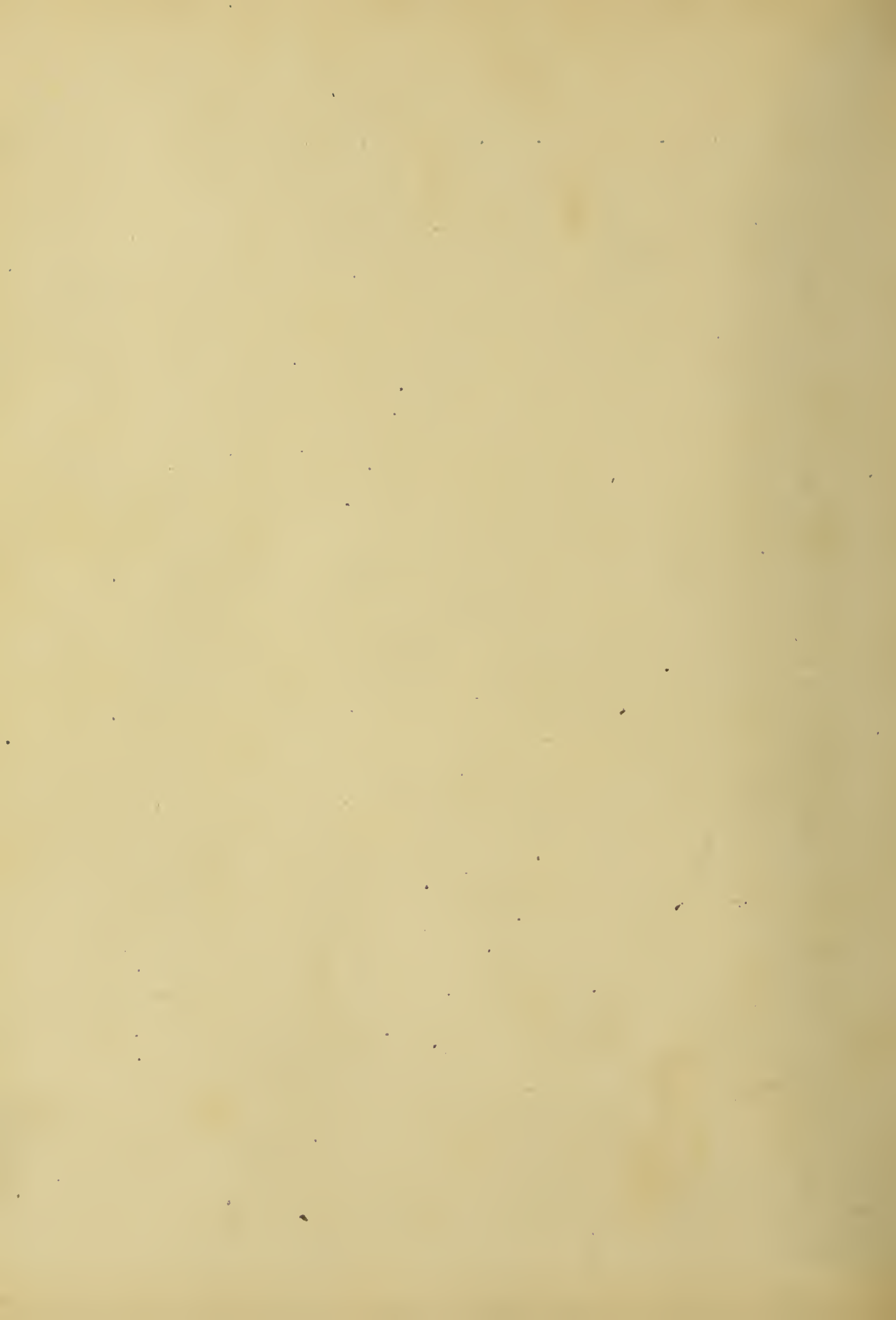


EXPENSES TO EARNINGS

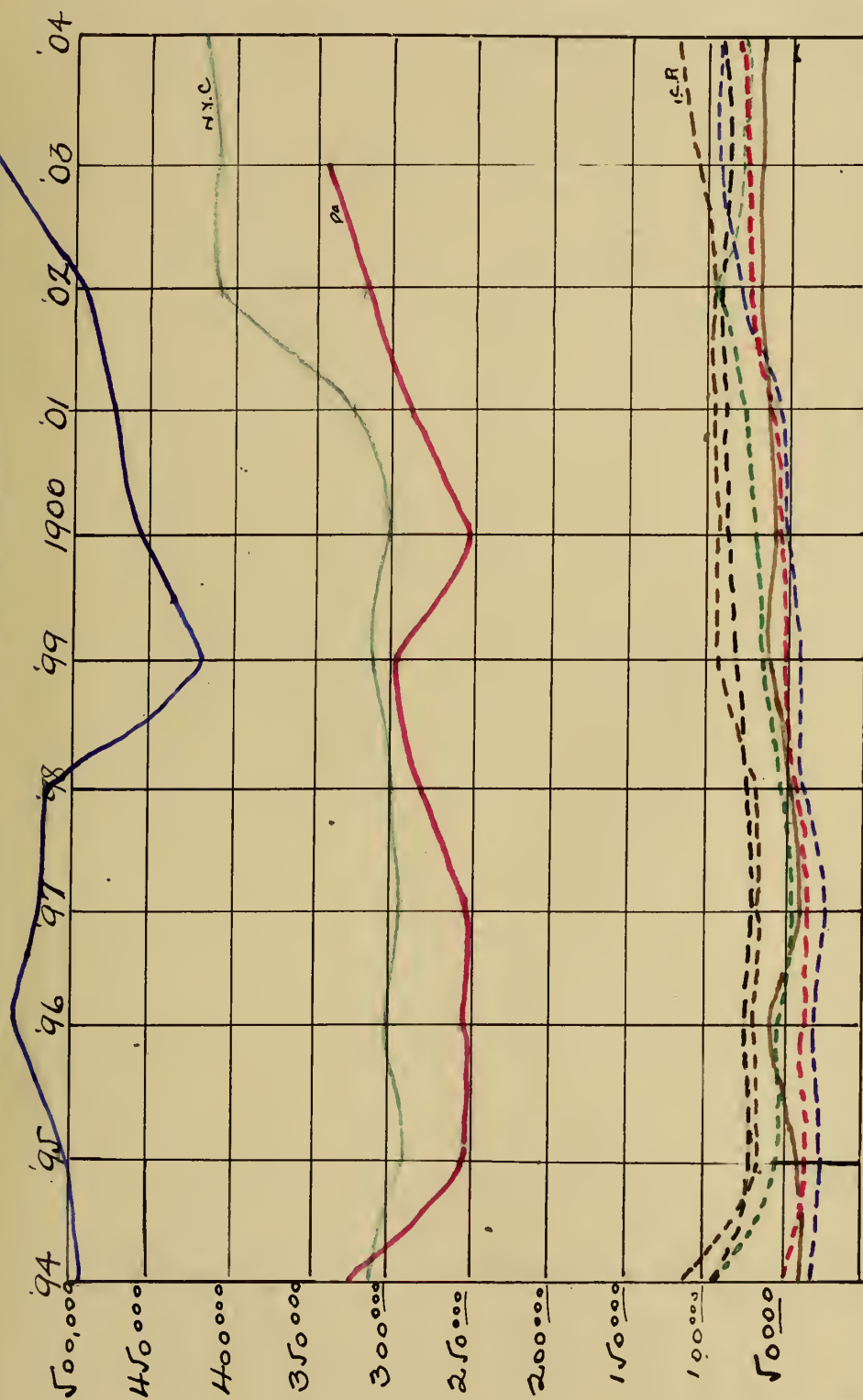


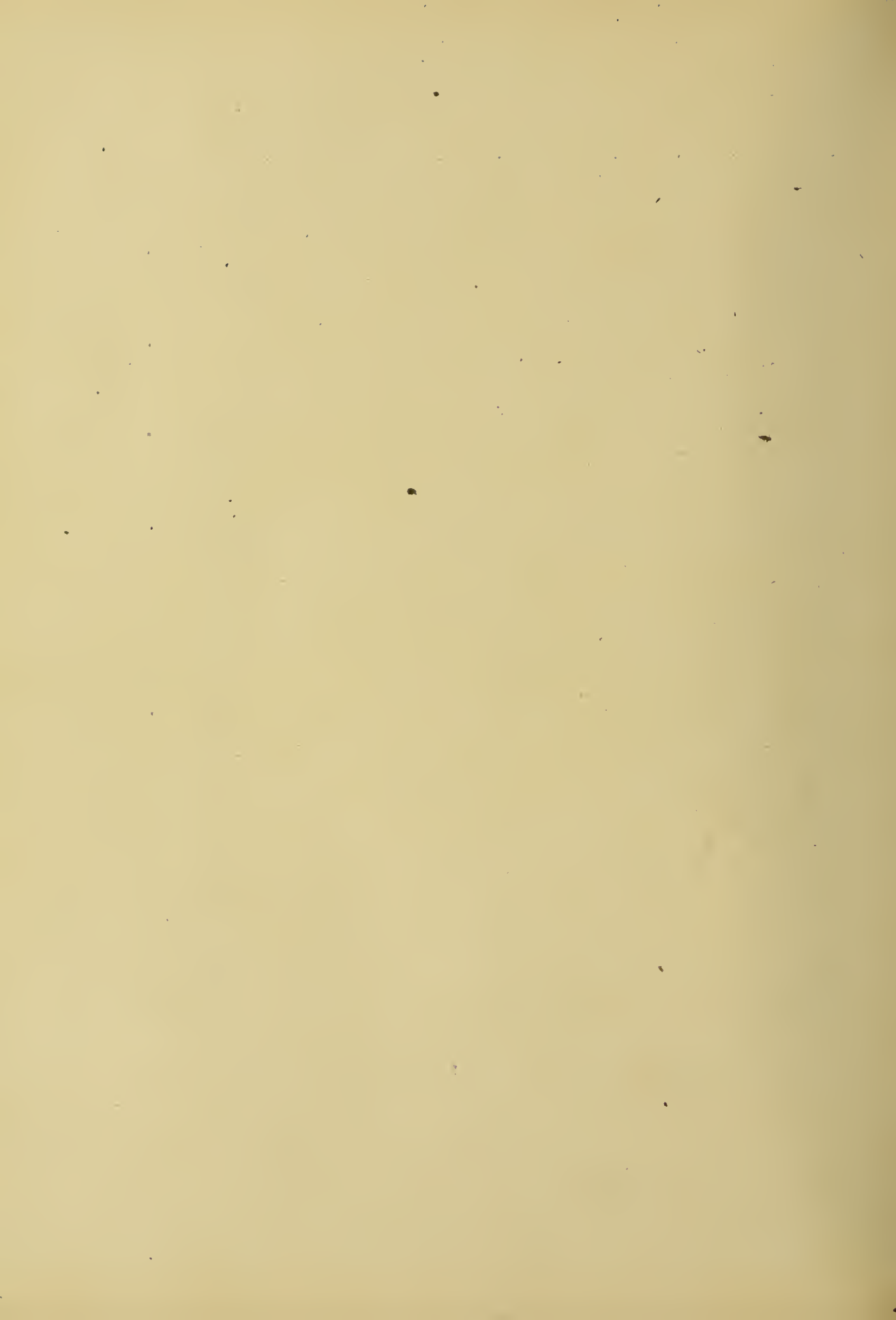
FRT DENSITY PER MILE OF ROAD



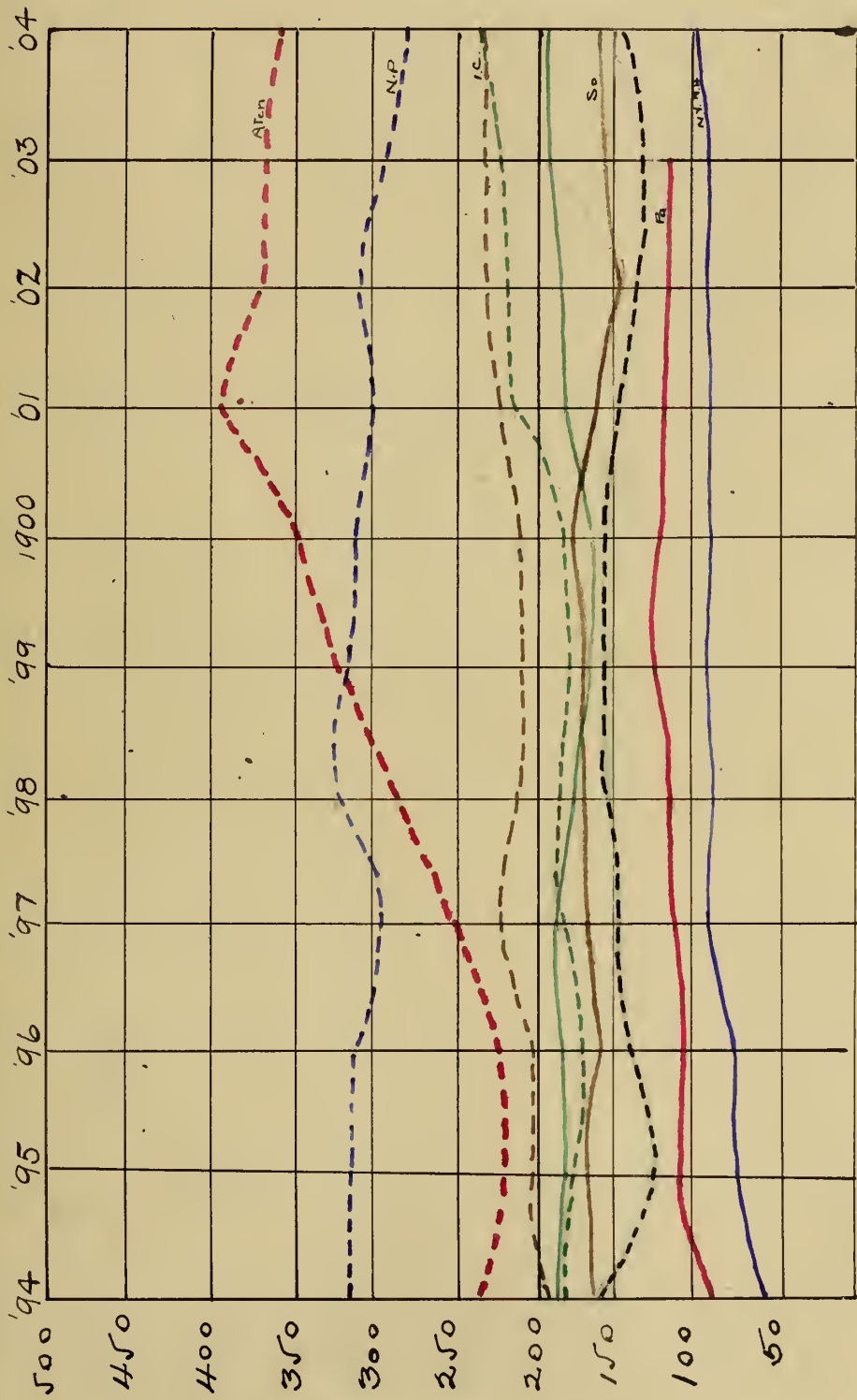


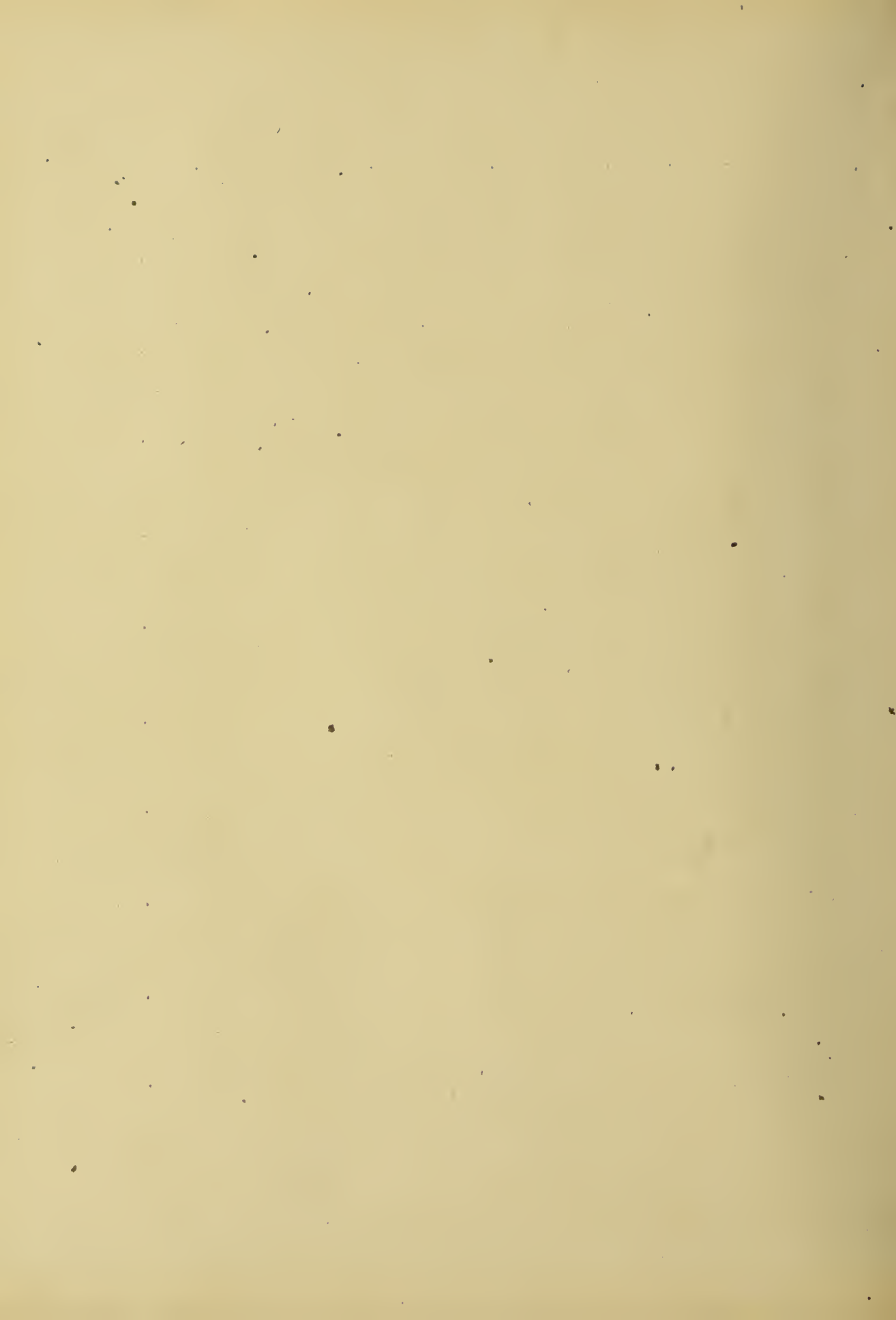
PAS. DENSITY PER MILE OF ROAD N.H. N.H.



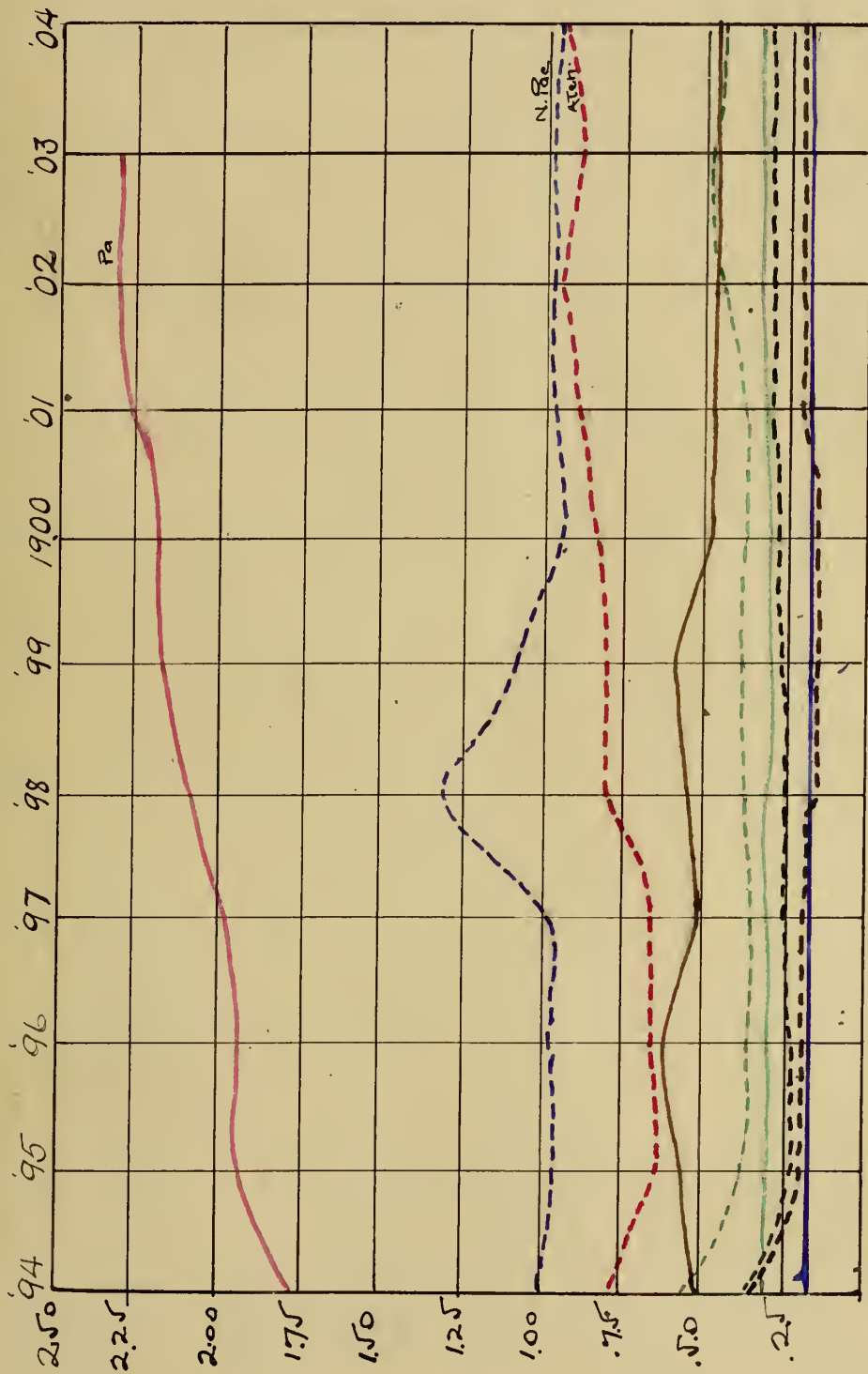


TON MILES PER TON

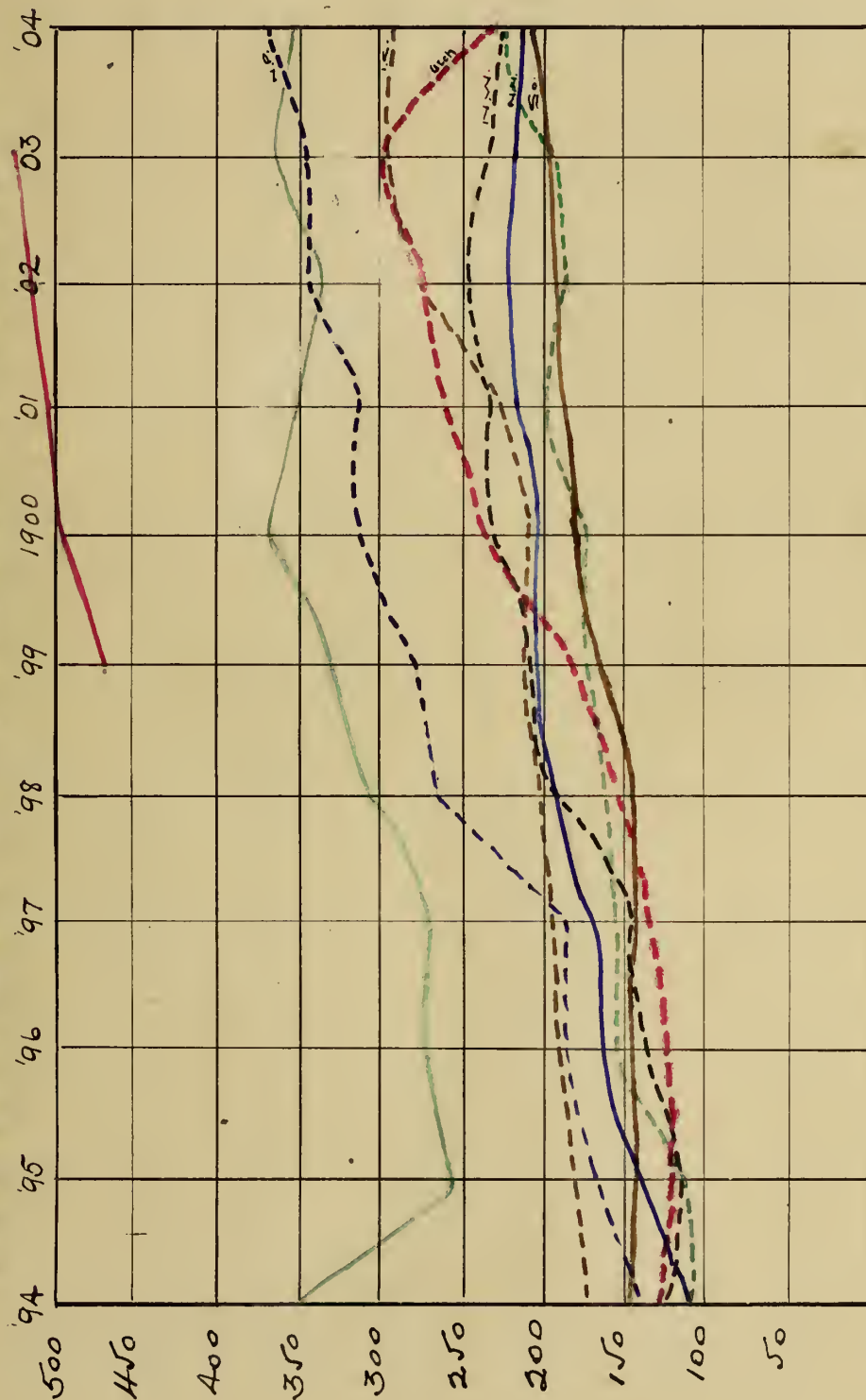




PASSENGER MILES PER PASSENGERS

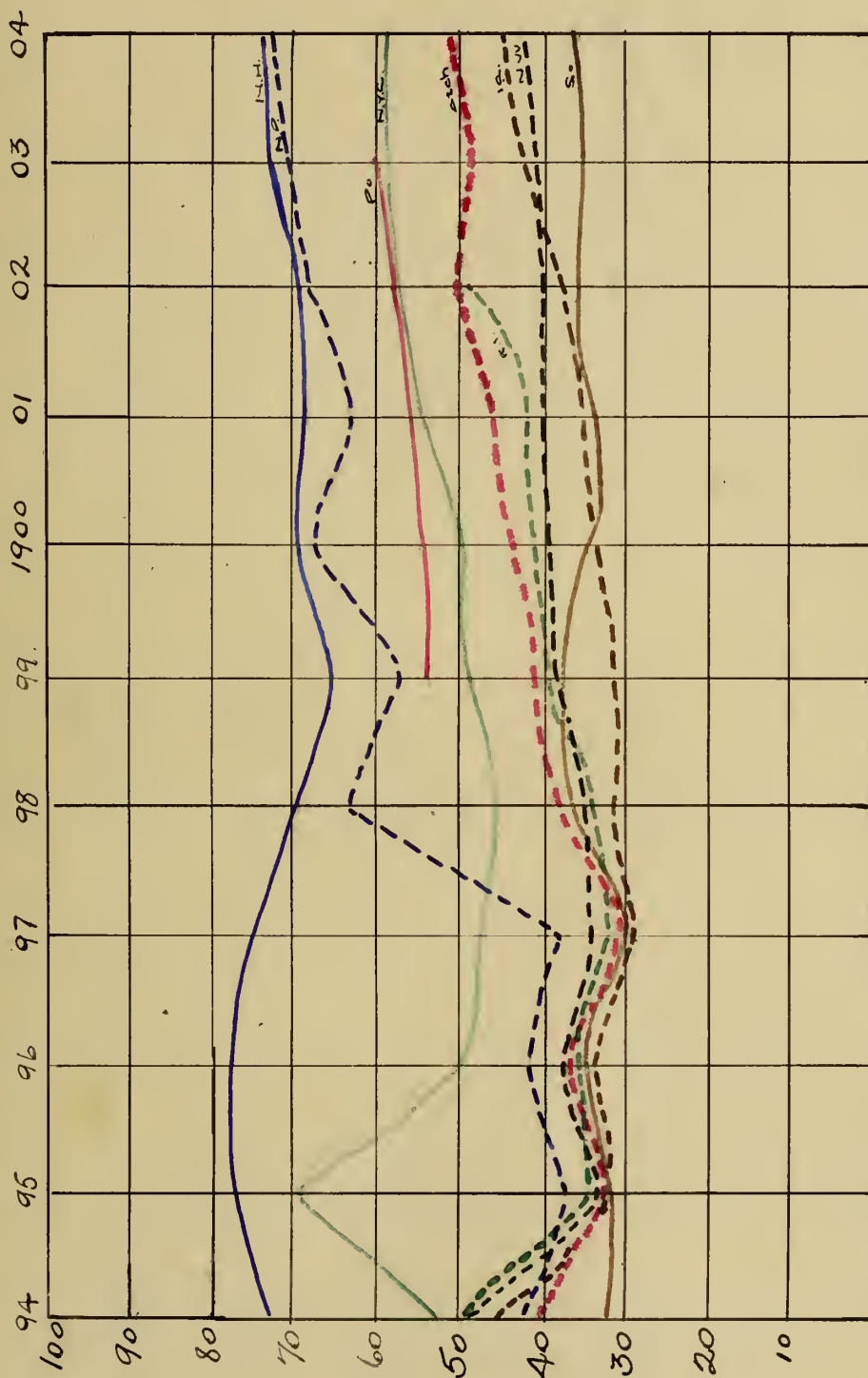


TON MILES PER FREIGHT TRAIN MILE

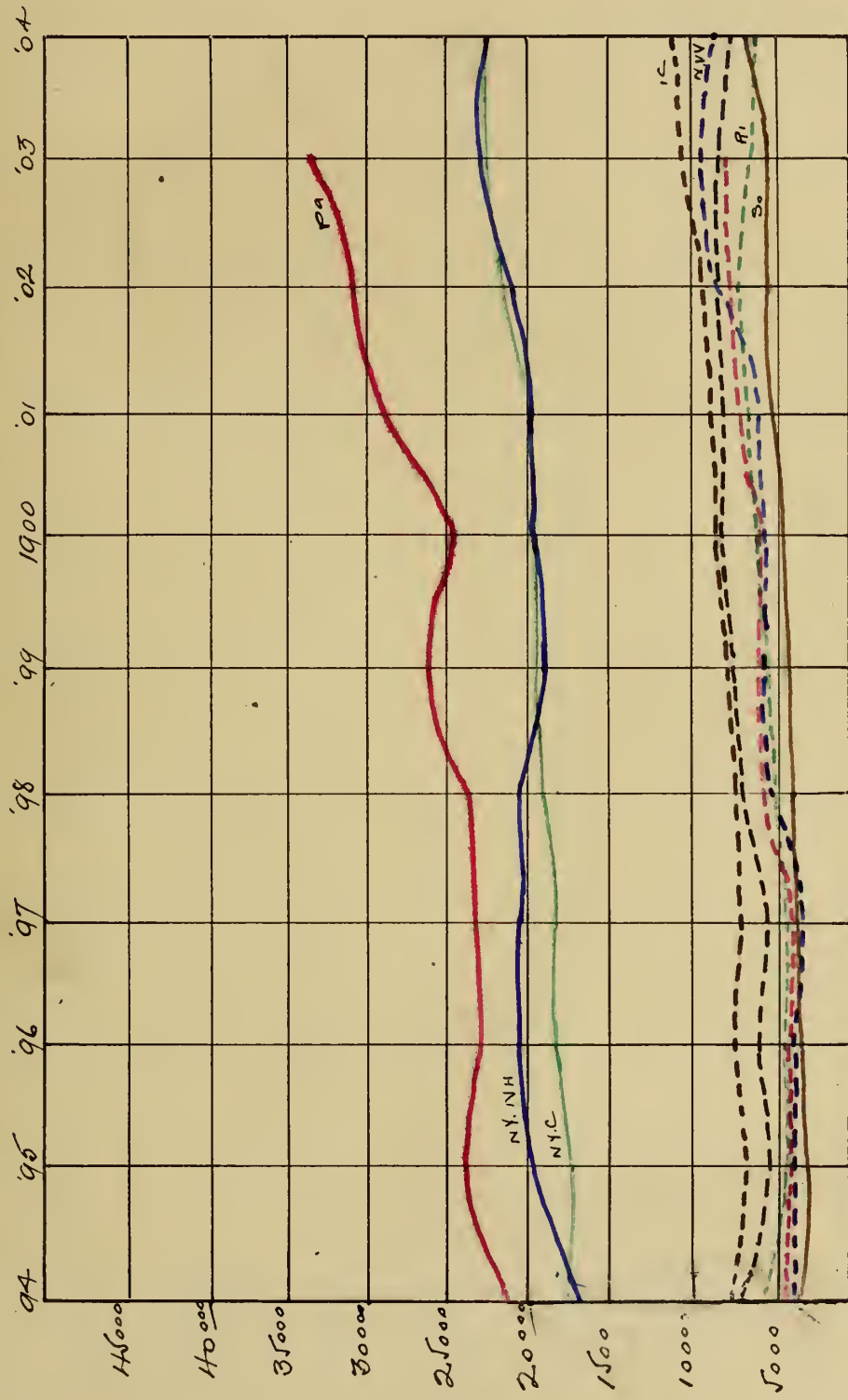




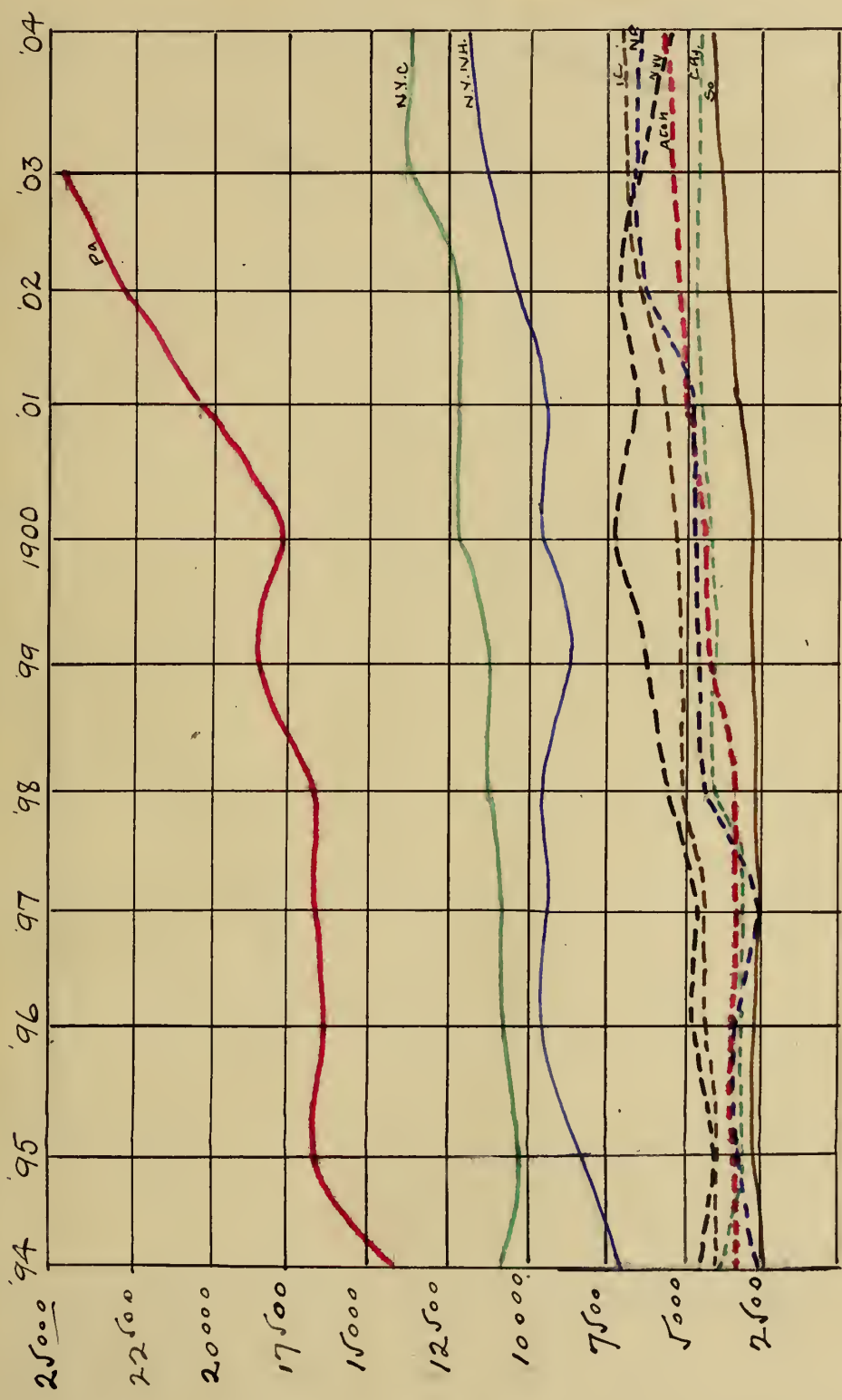
PASSENGER MILES PER PAS. TRAIN MILE



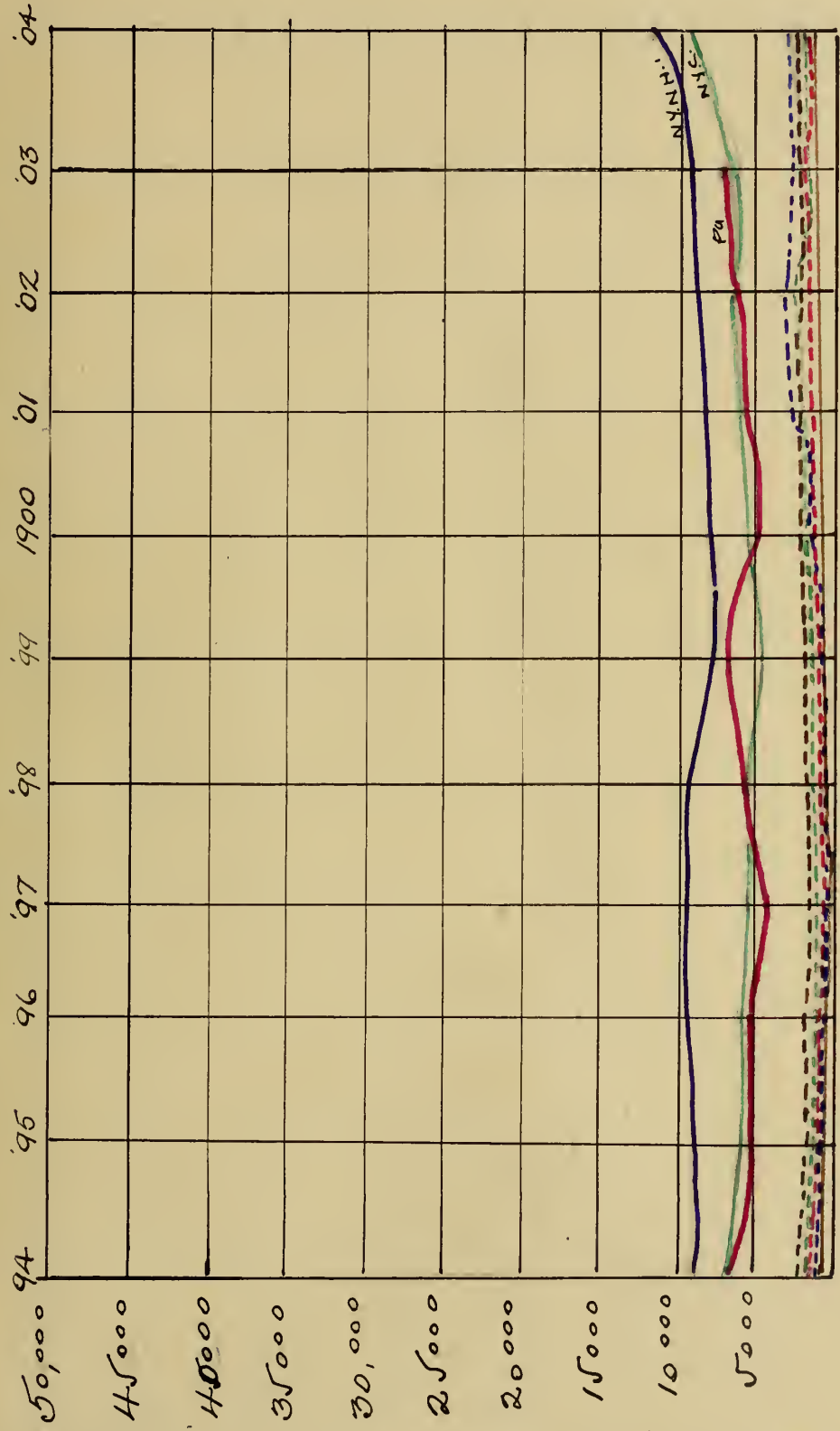
GROSS EARNINGS PER MILE OF ROAD



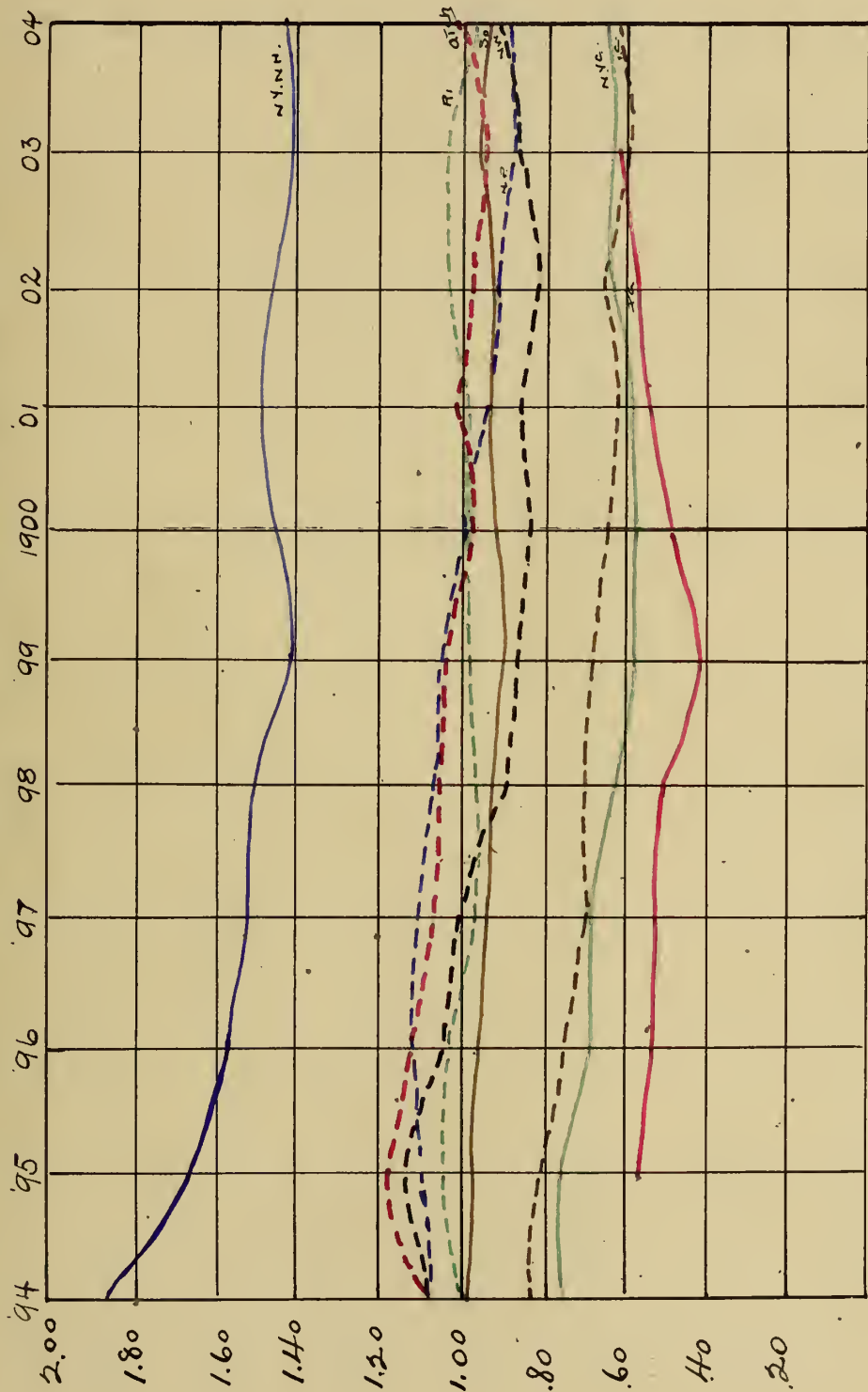
FRT EARNINGS PER MILE OF ROAD



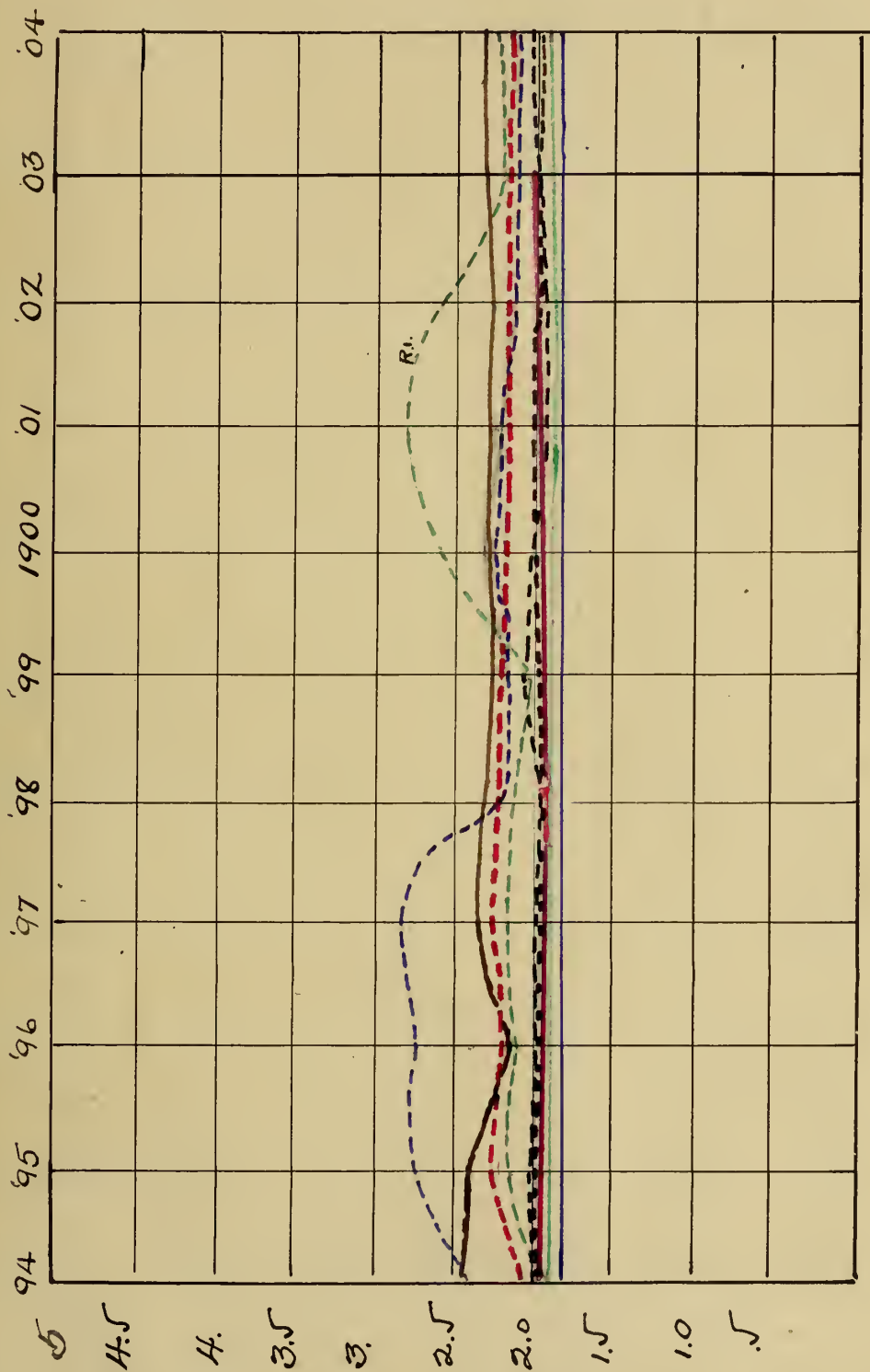
PASSENGER EARNINGS PER MILE OF ROAD



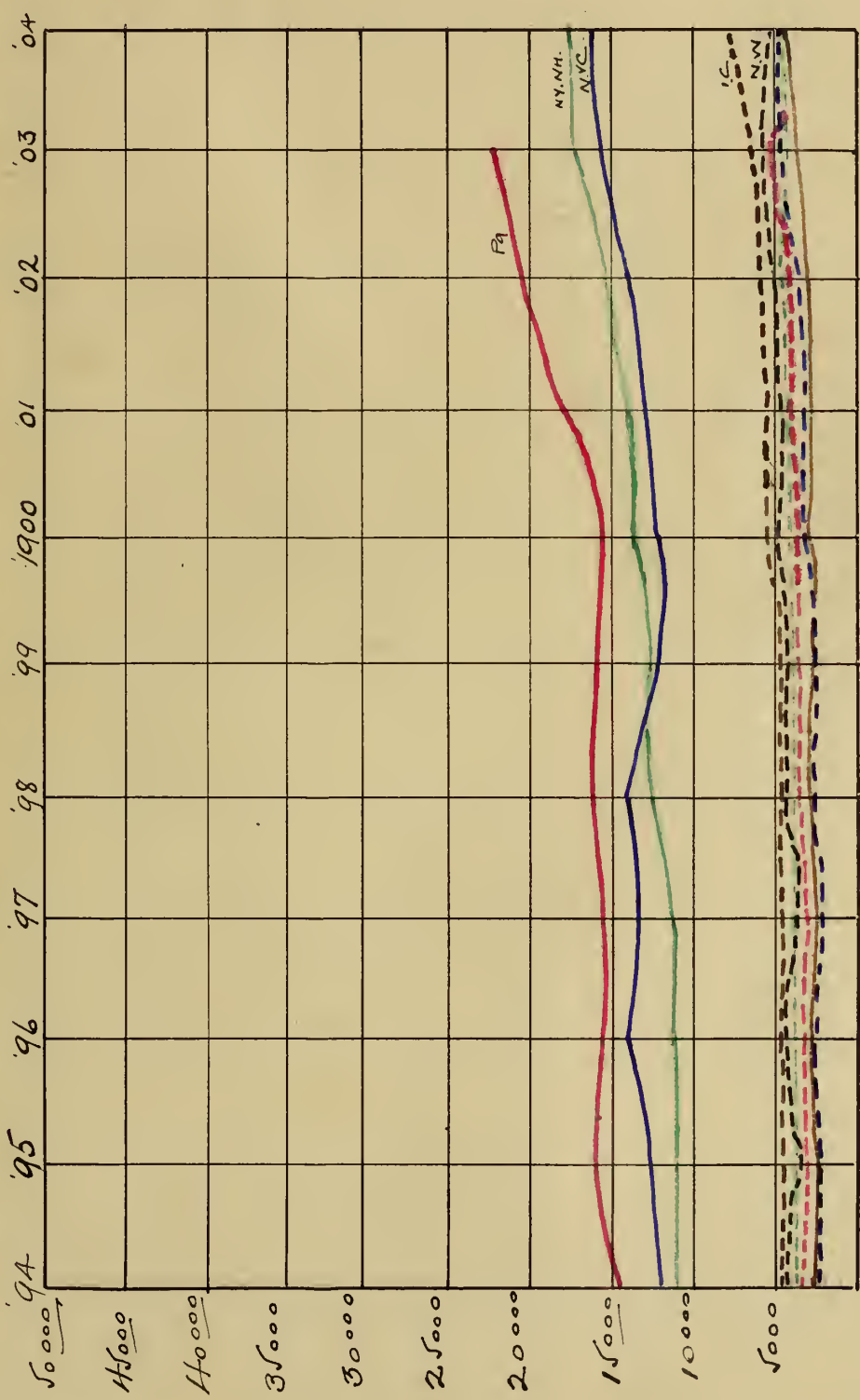
REVENUE PER TON MILE



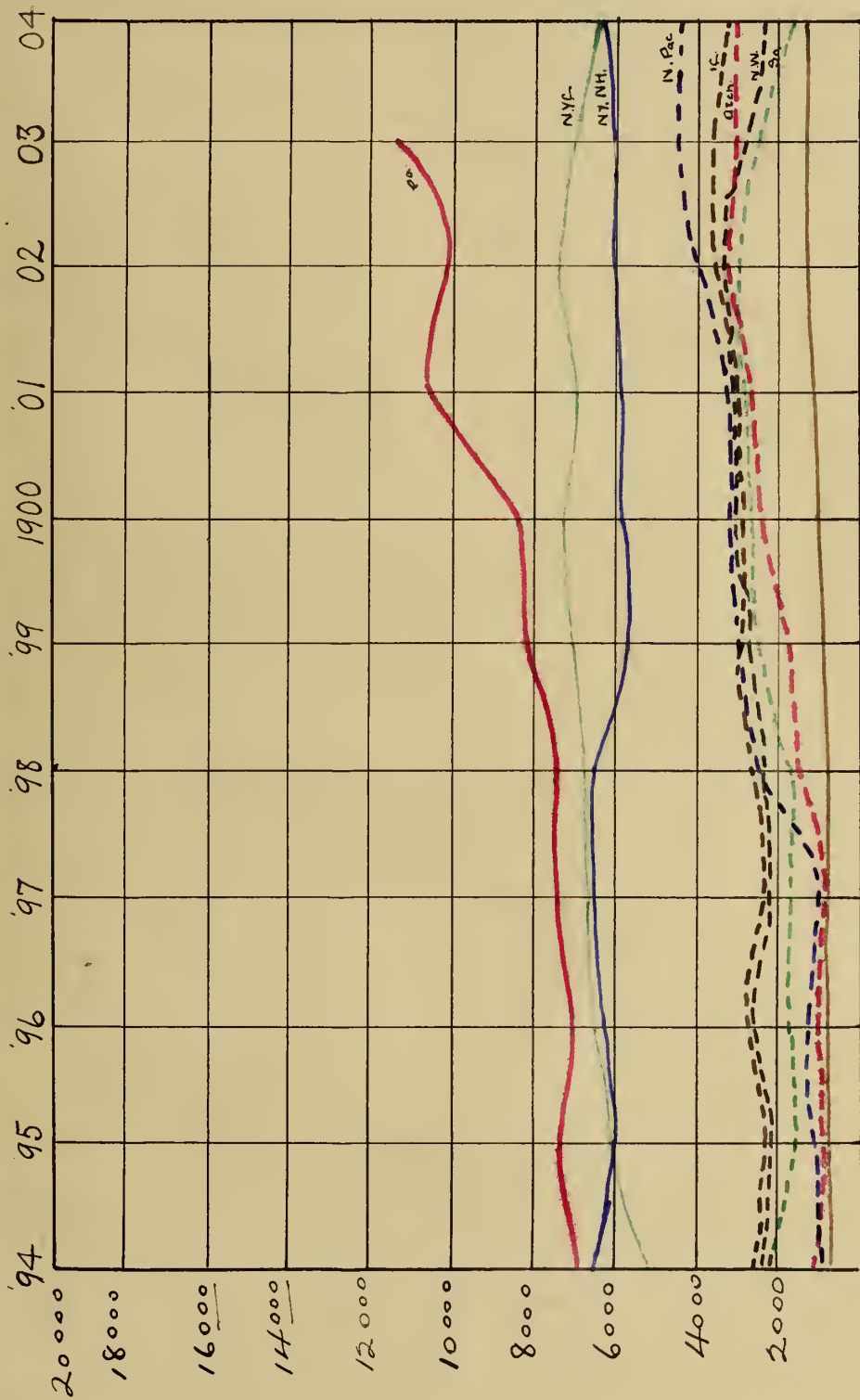
REVENUE PER PASSENGER MILE



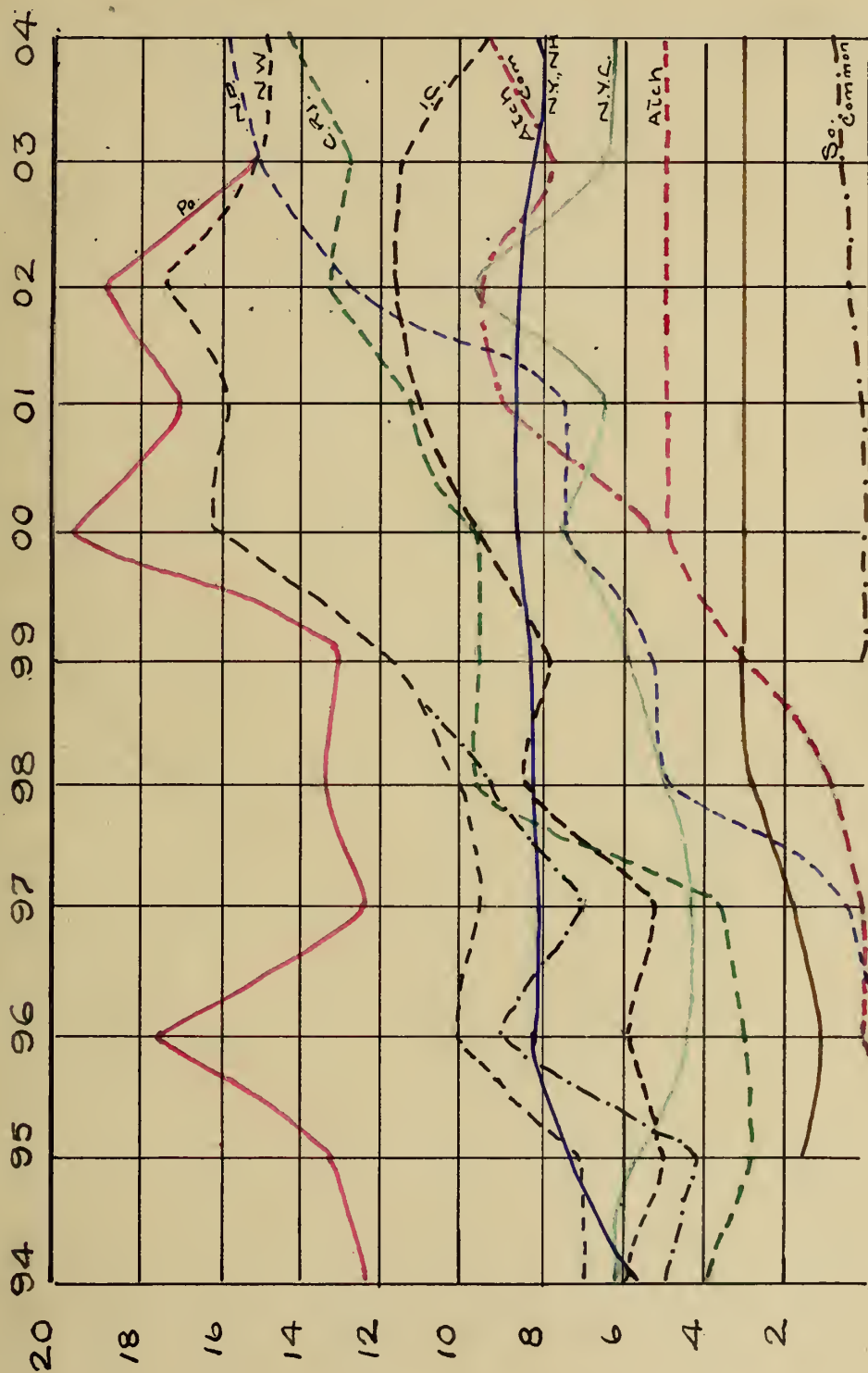
GROSS EXPENSES PER MILE OF LINE



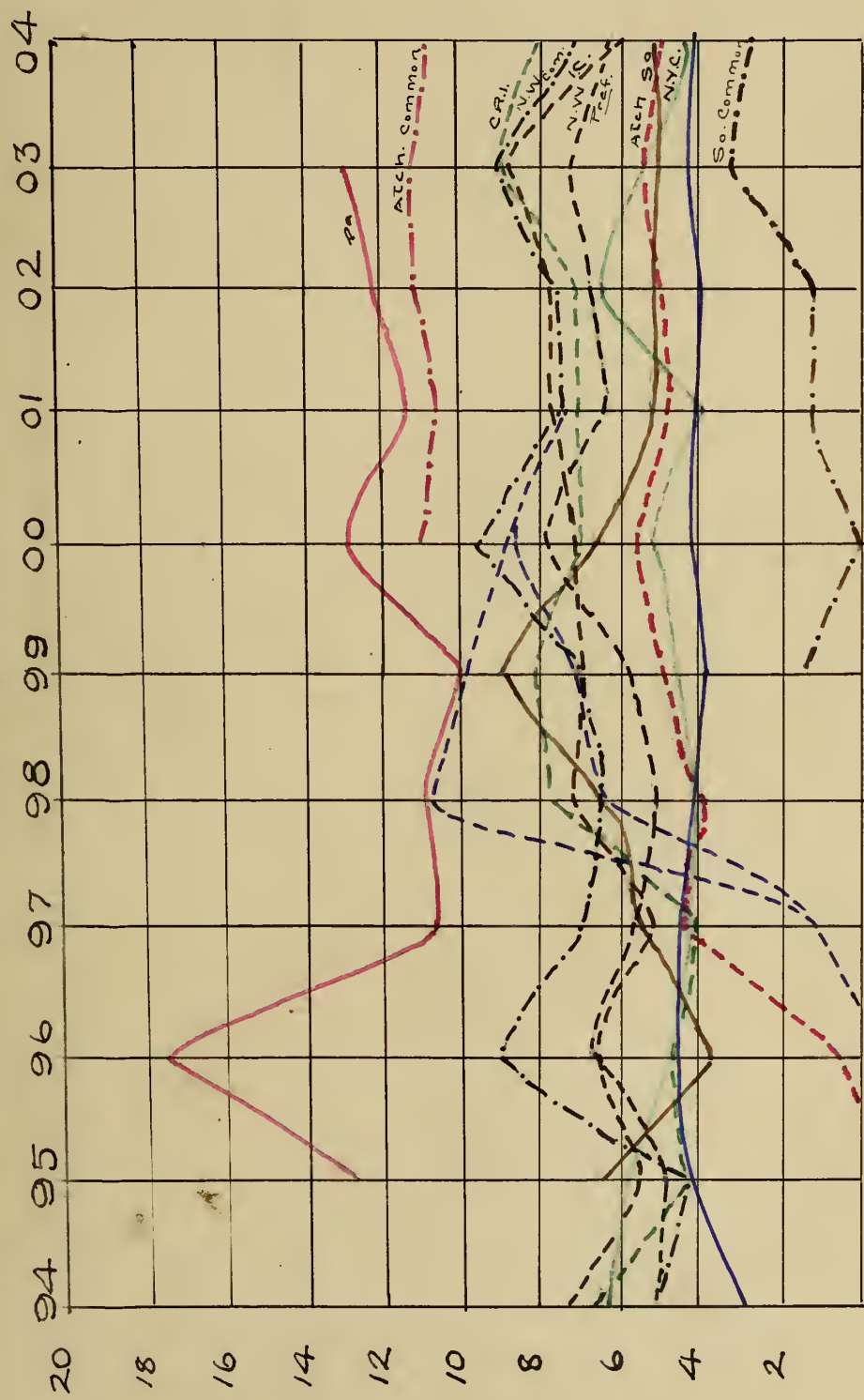
NET EARNINGS PER MILE OF ROAD



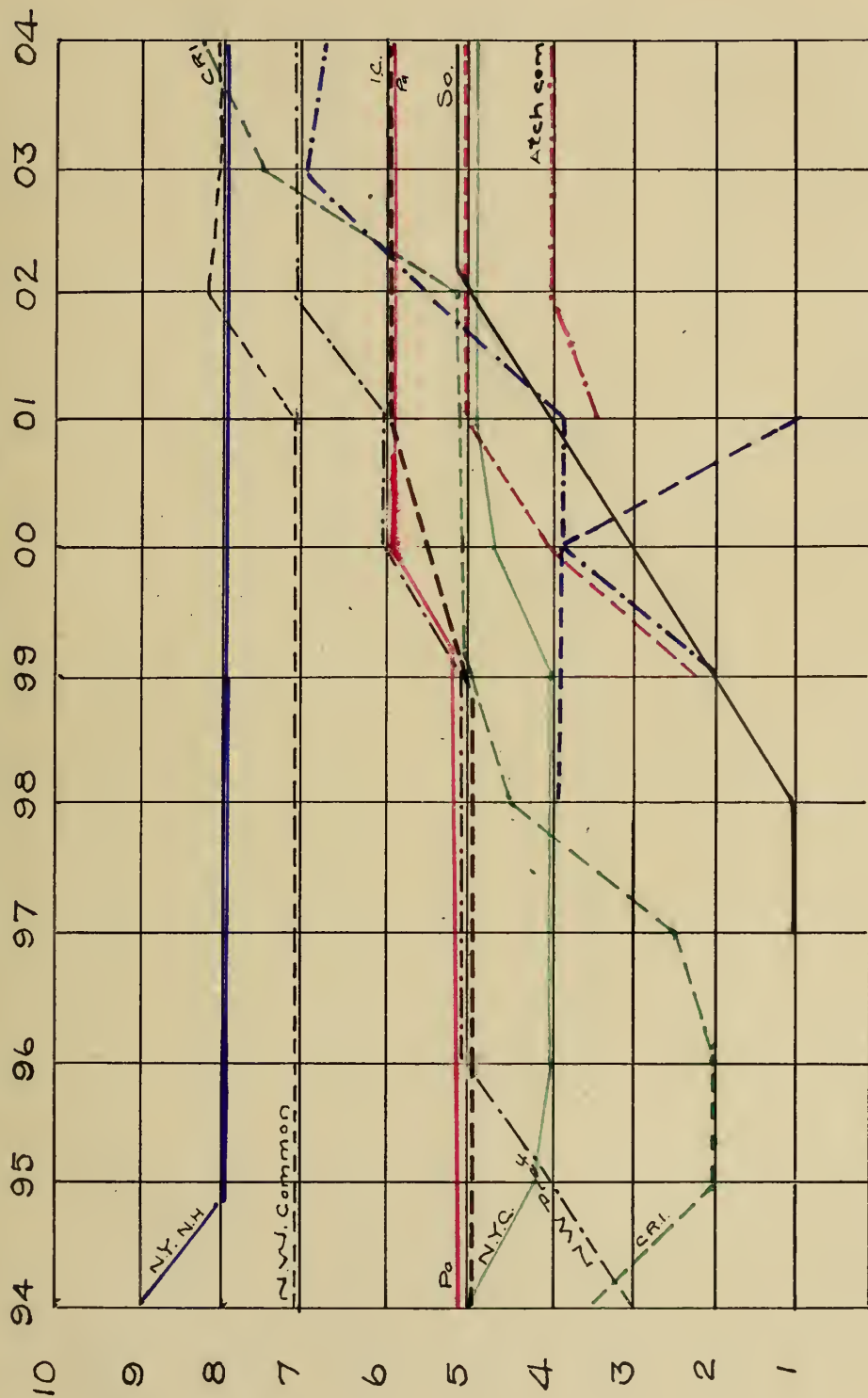
POSSIBLE DIVIDENDS



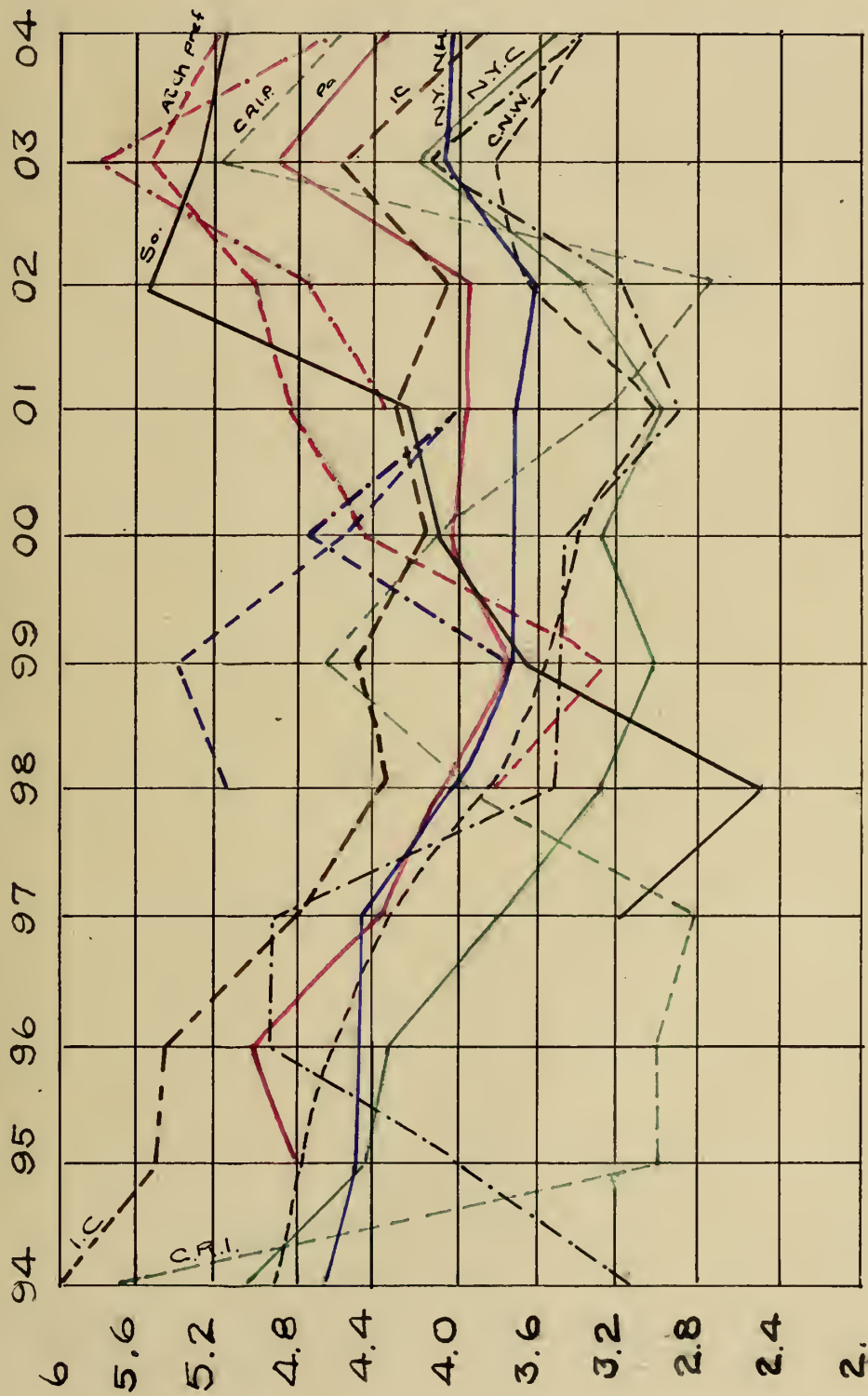
POSSIBLE NET RETURN ON INVESTMENT



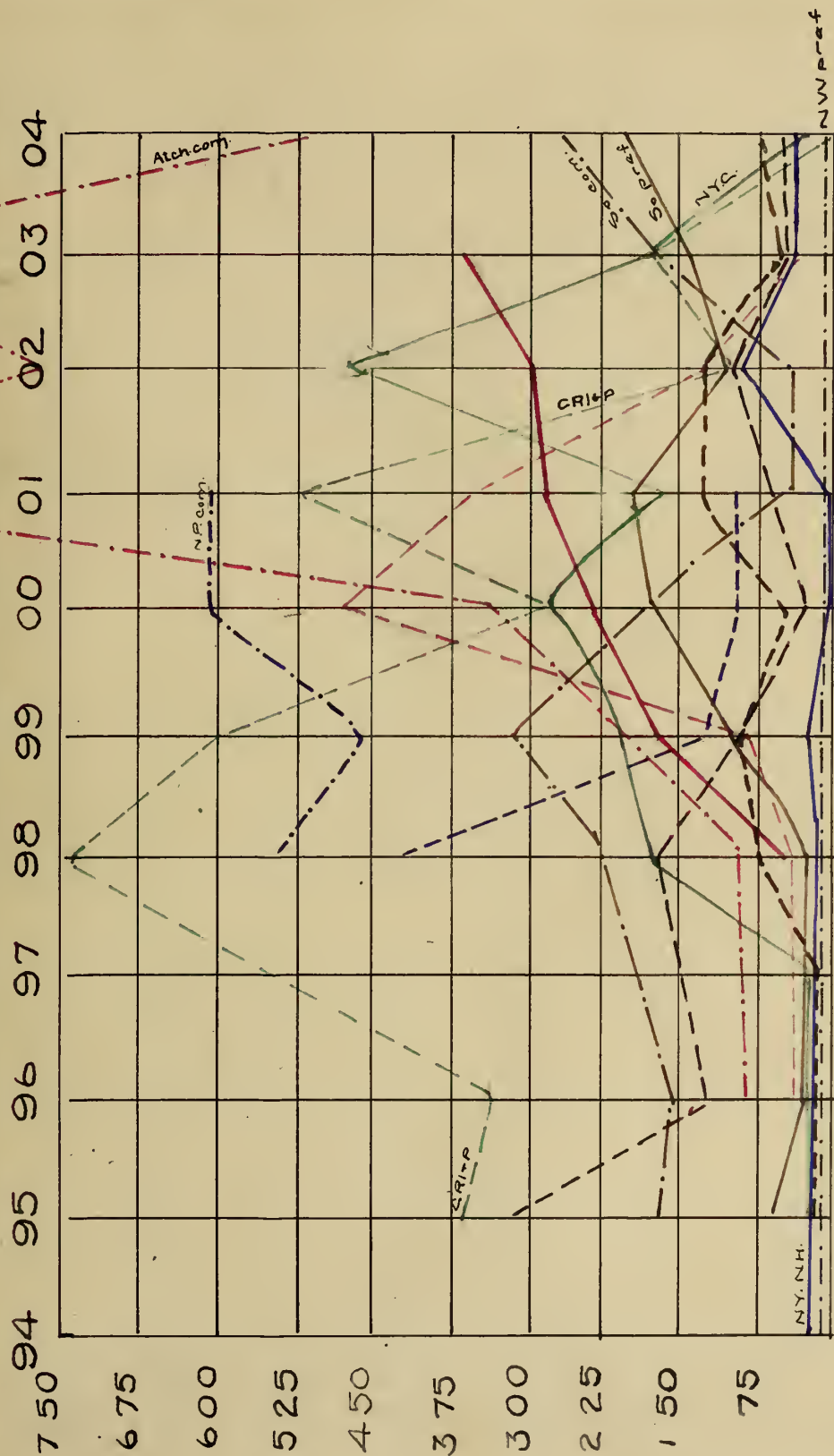
DIVIDENDS PAID



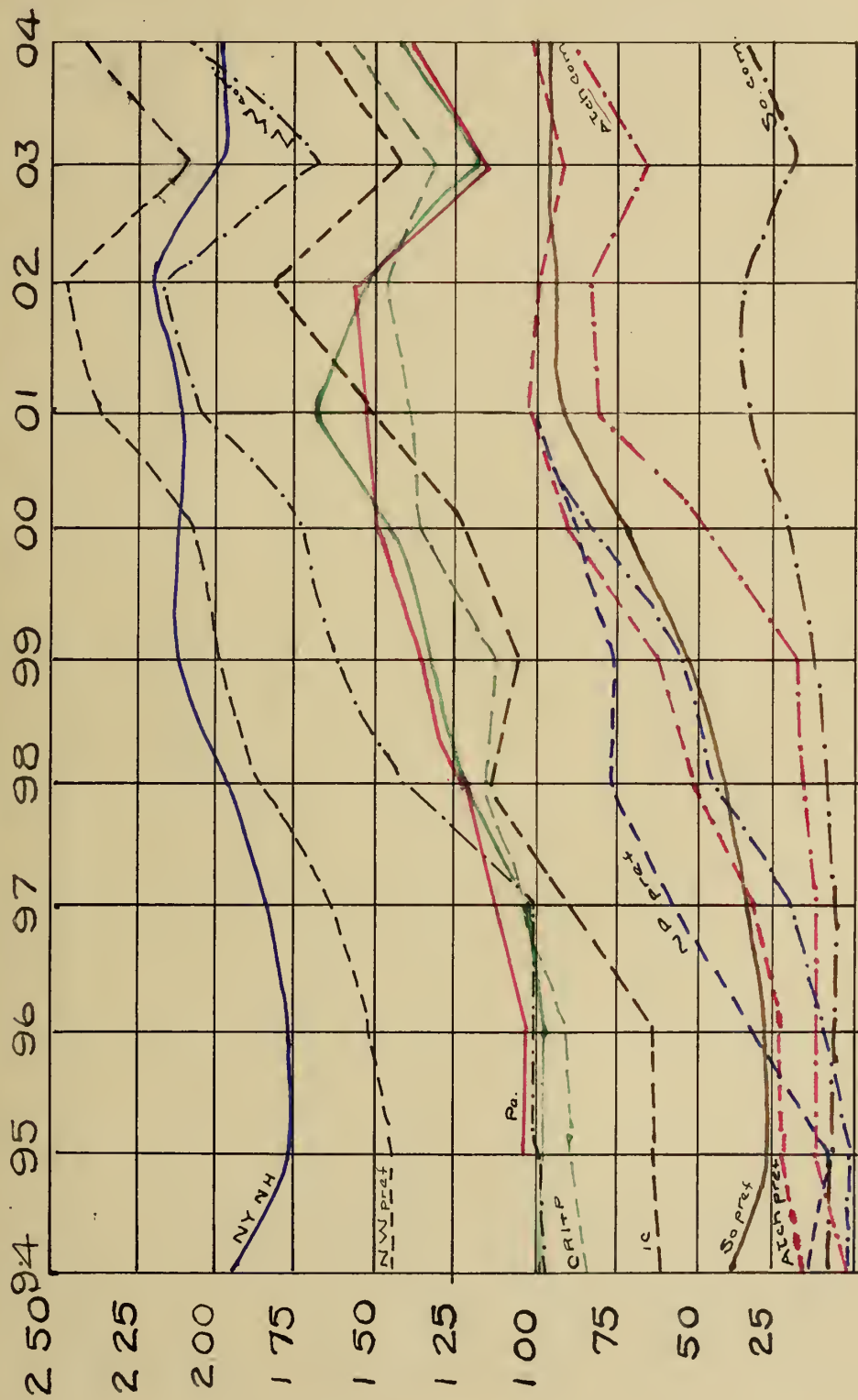
NET TO INVESTOR FROM DIVIDENDS



ANNUAL TURN ON EXCHANGE

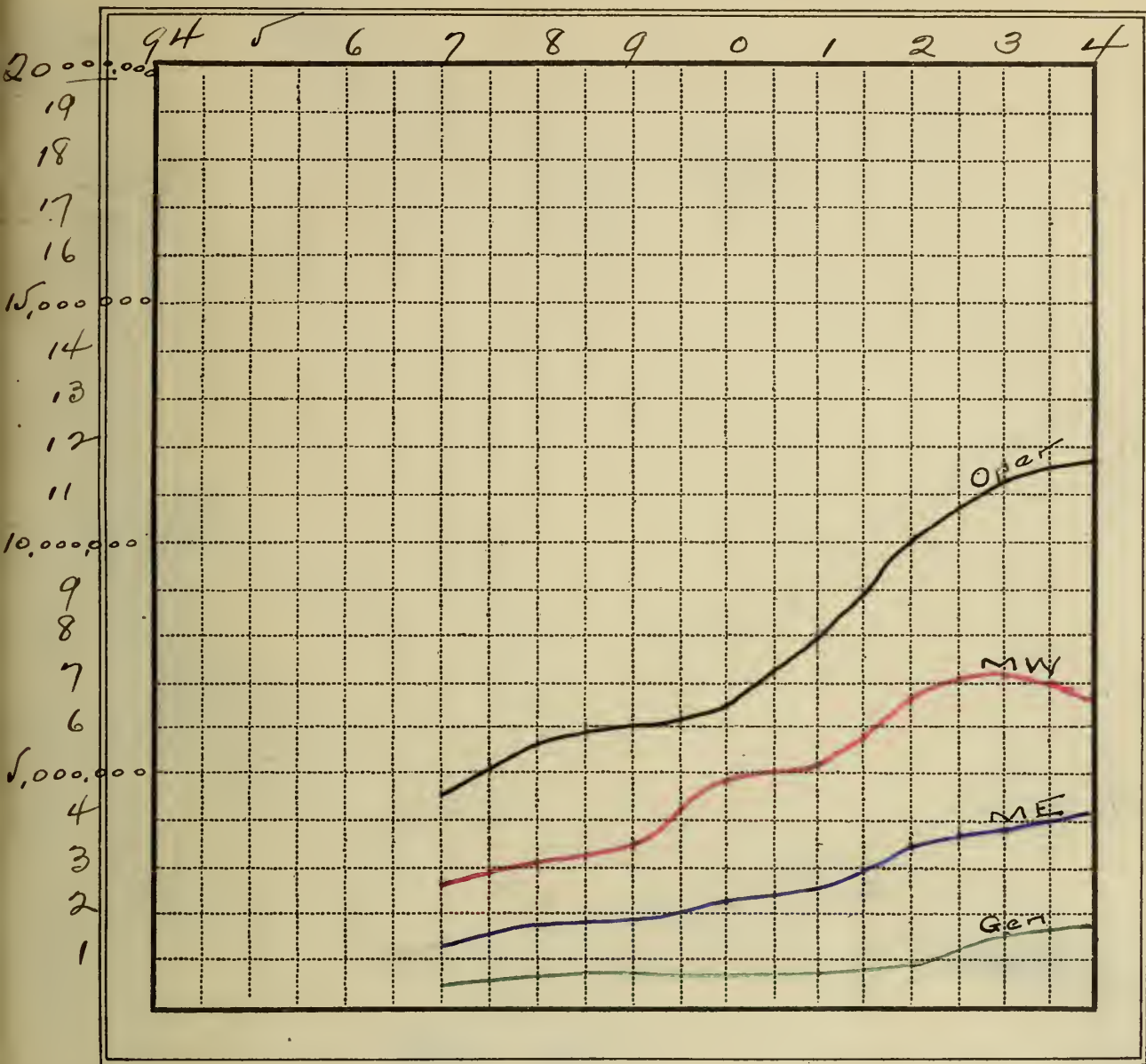


MARKET PRICE OF STOCK



Northern Pacific

CHART SHOWING Operating Expenses



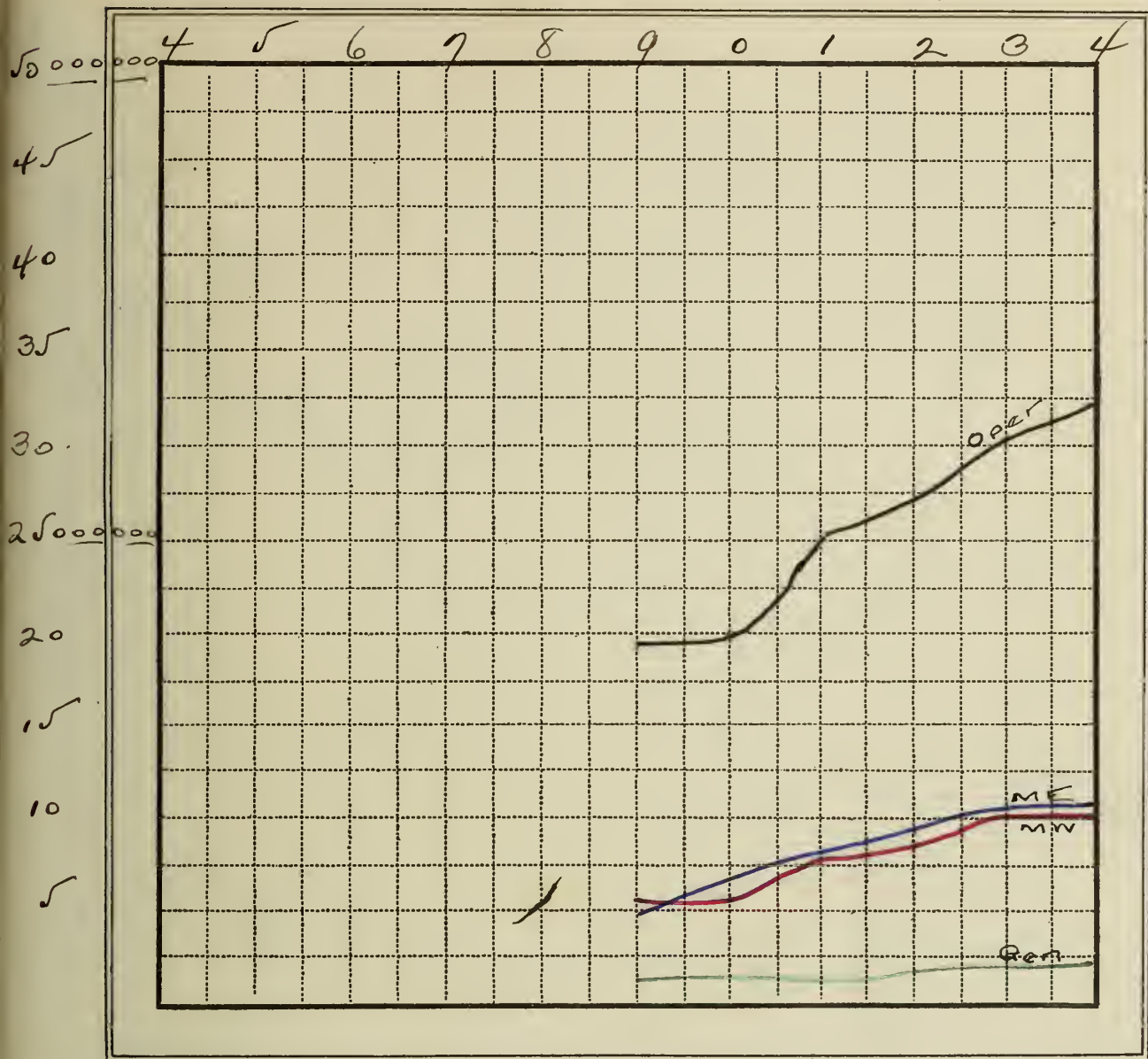
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New York Central + Hudson River.

CHART SHOWING Operating Expenses.



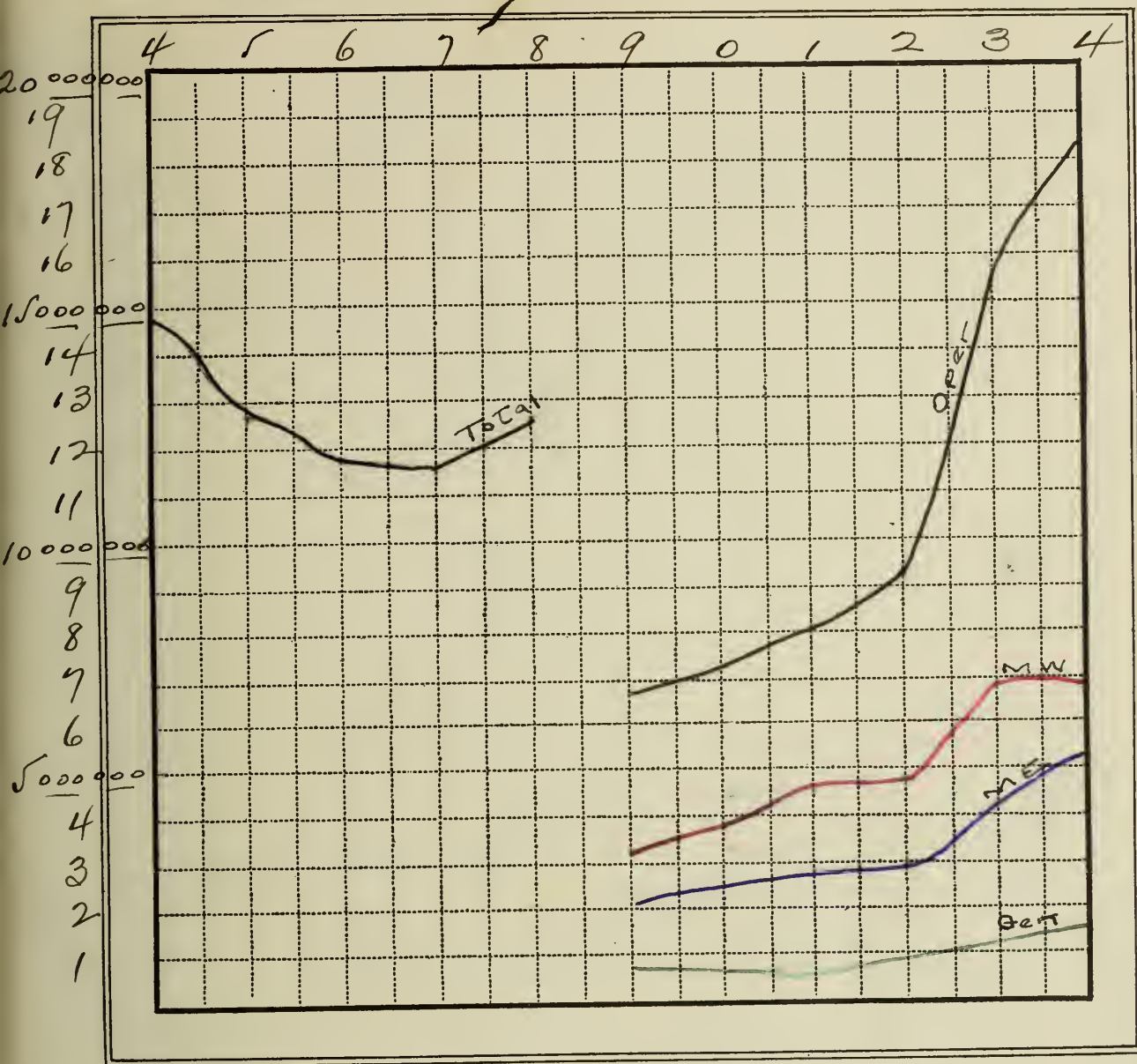
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Chicago, Rock Island + Pacific Railway Co.

CHART SHOWING Operating Expenses



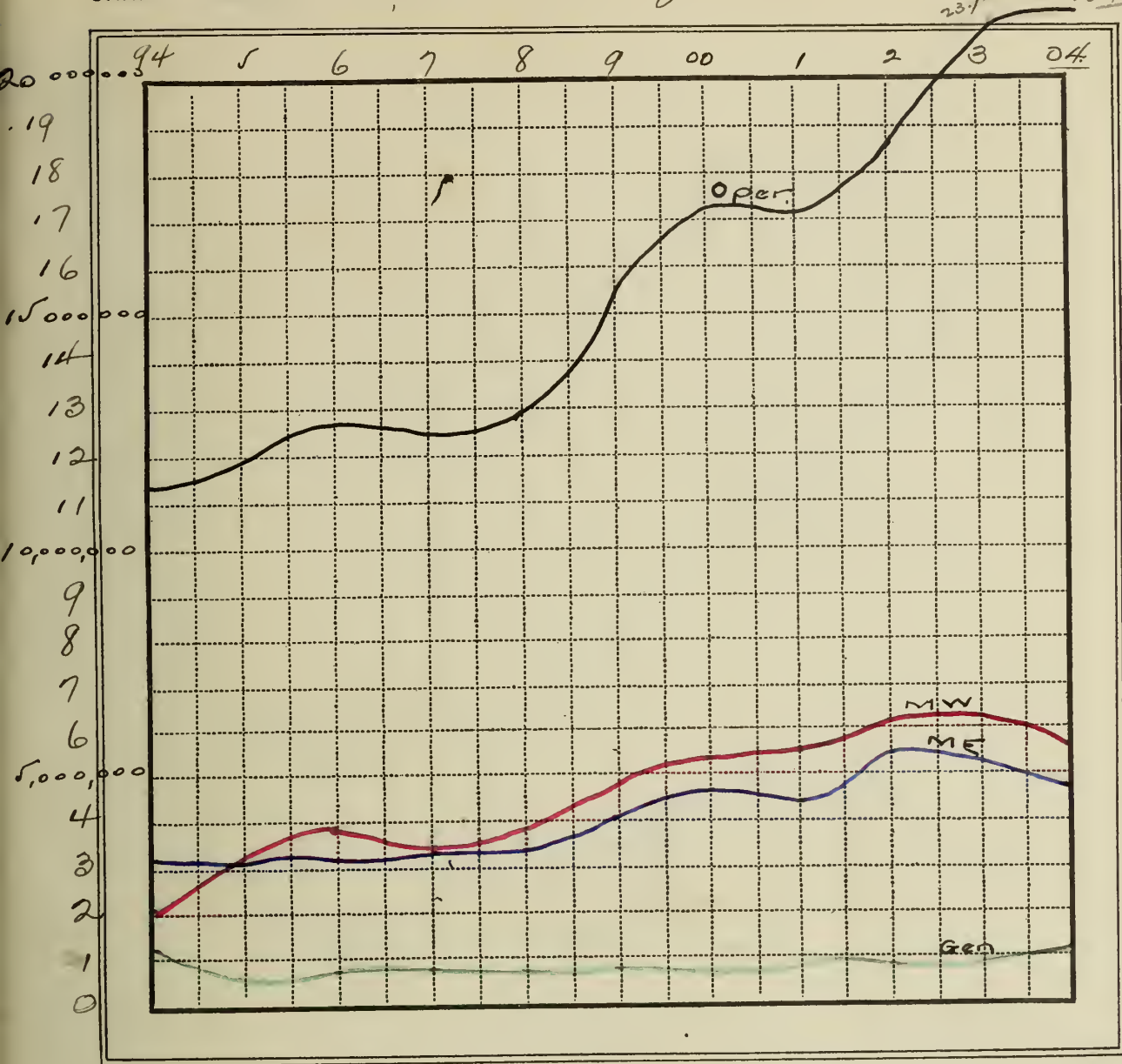
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New York, New Haven + Hartford.

CHART SHOWING Expenditures of Operating



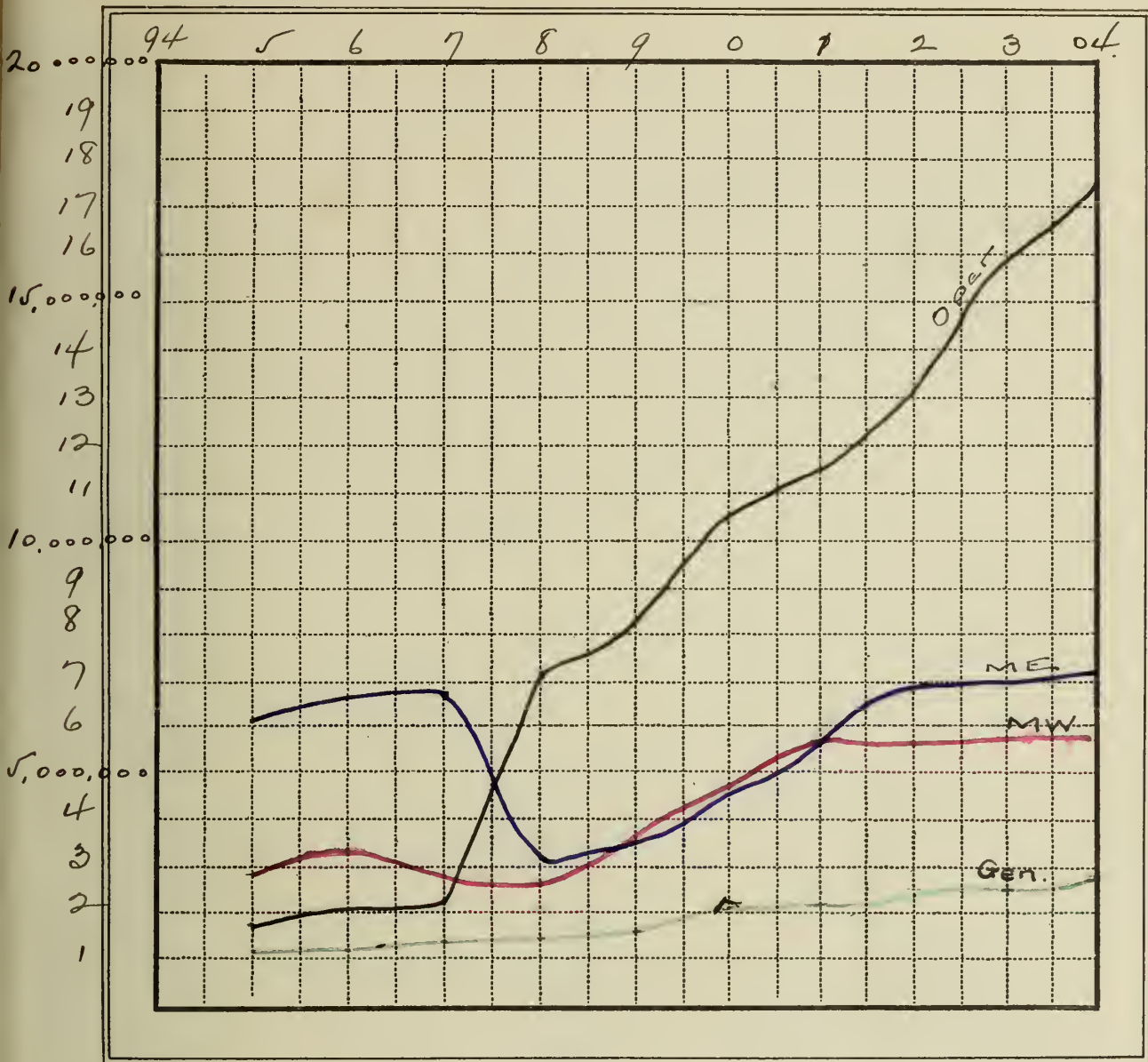
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Southern Railroad

CHART SHOWING Operating Expenditures



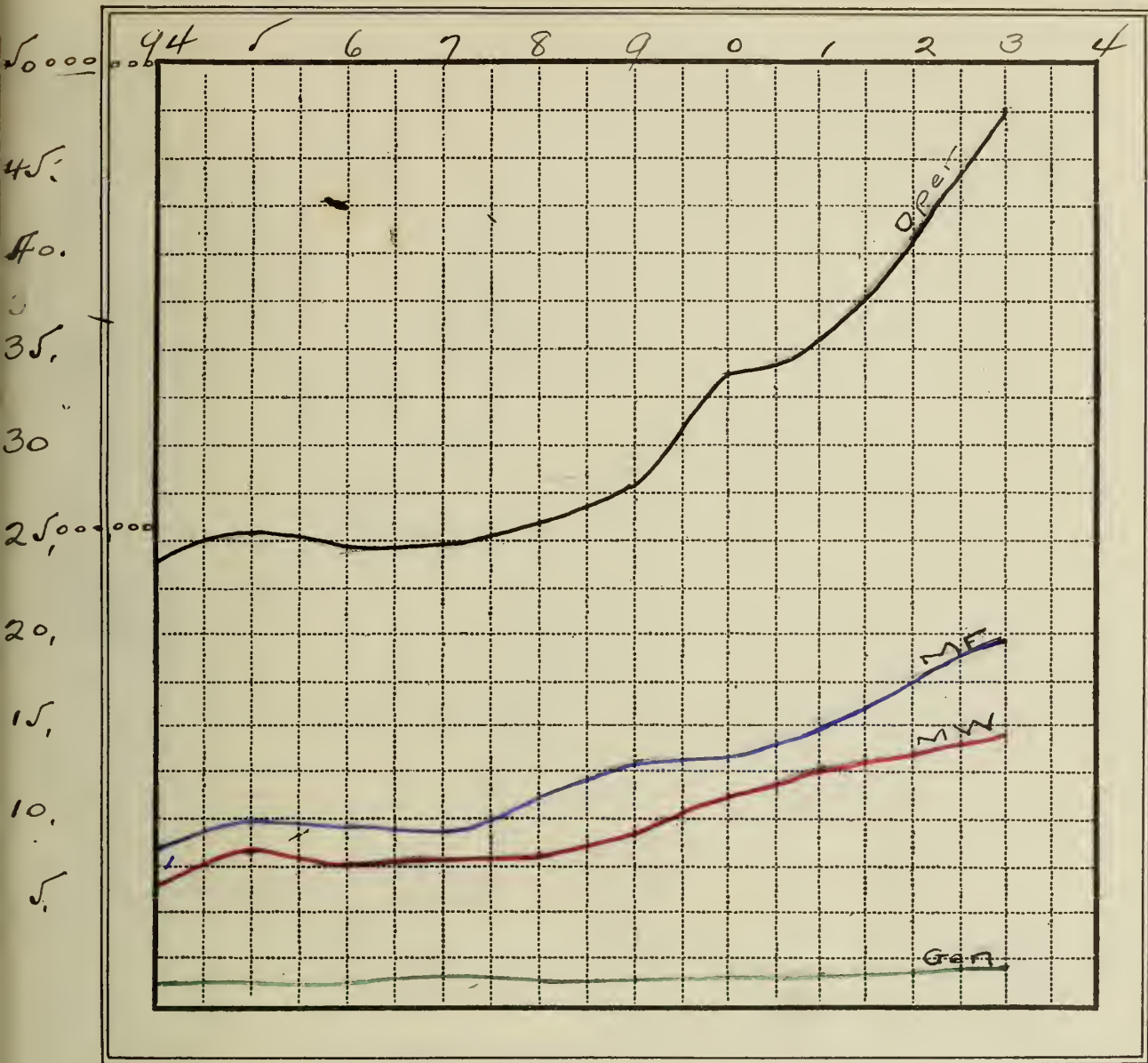
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Pennsylvania
Lines East of Pittsburgh
Operating Expenses

CHART SHOWING

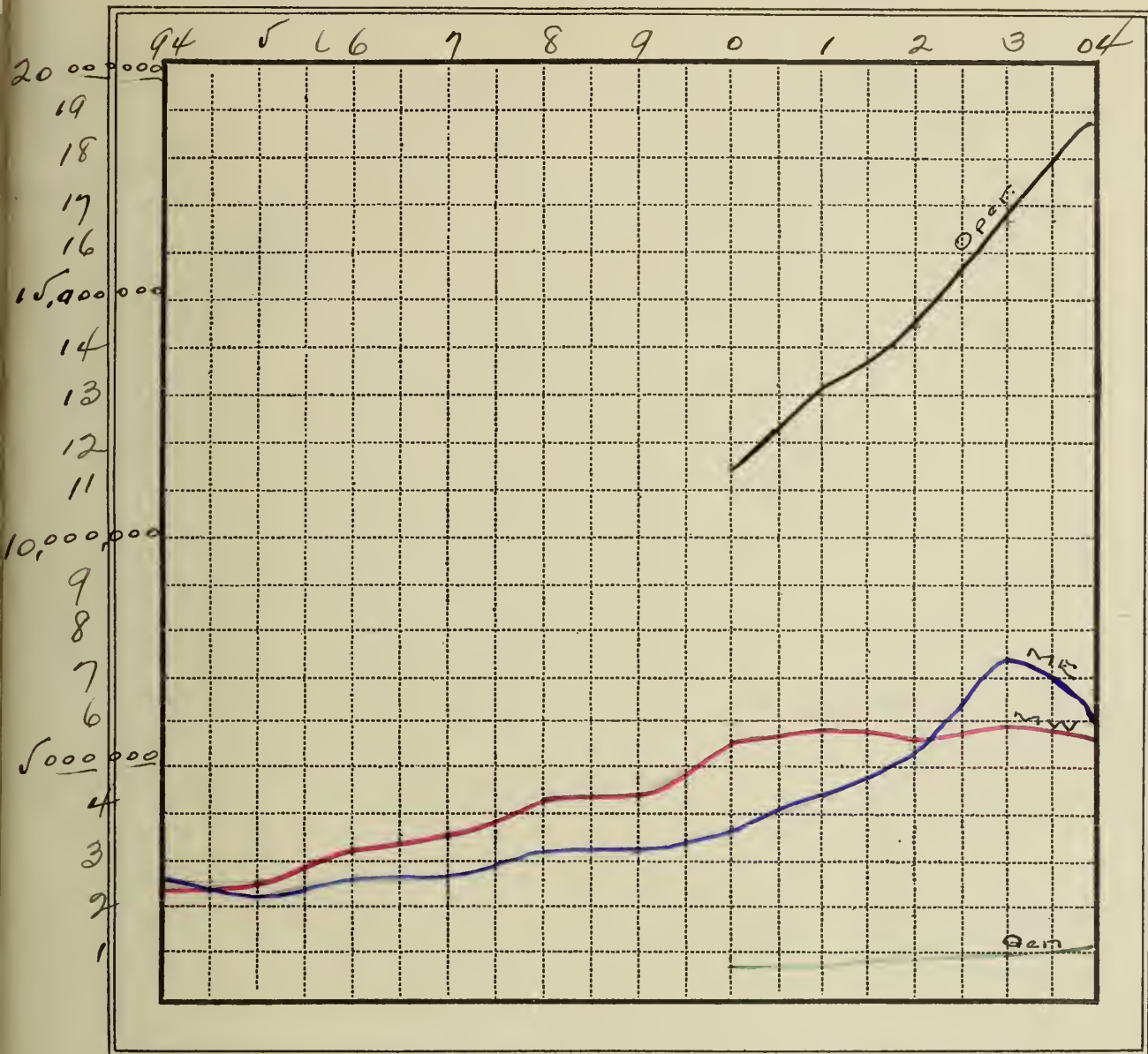


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Illinois Central

CHART SHOWING *Operating Expenses*



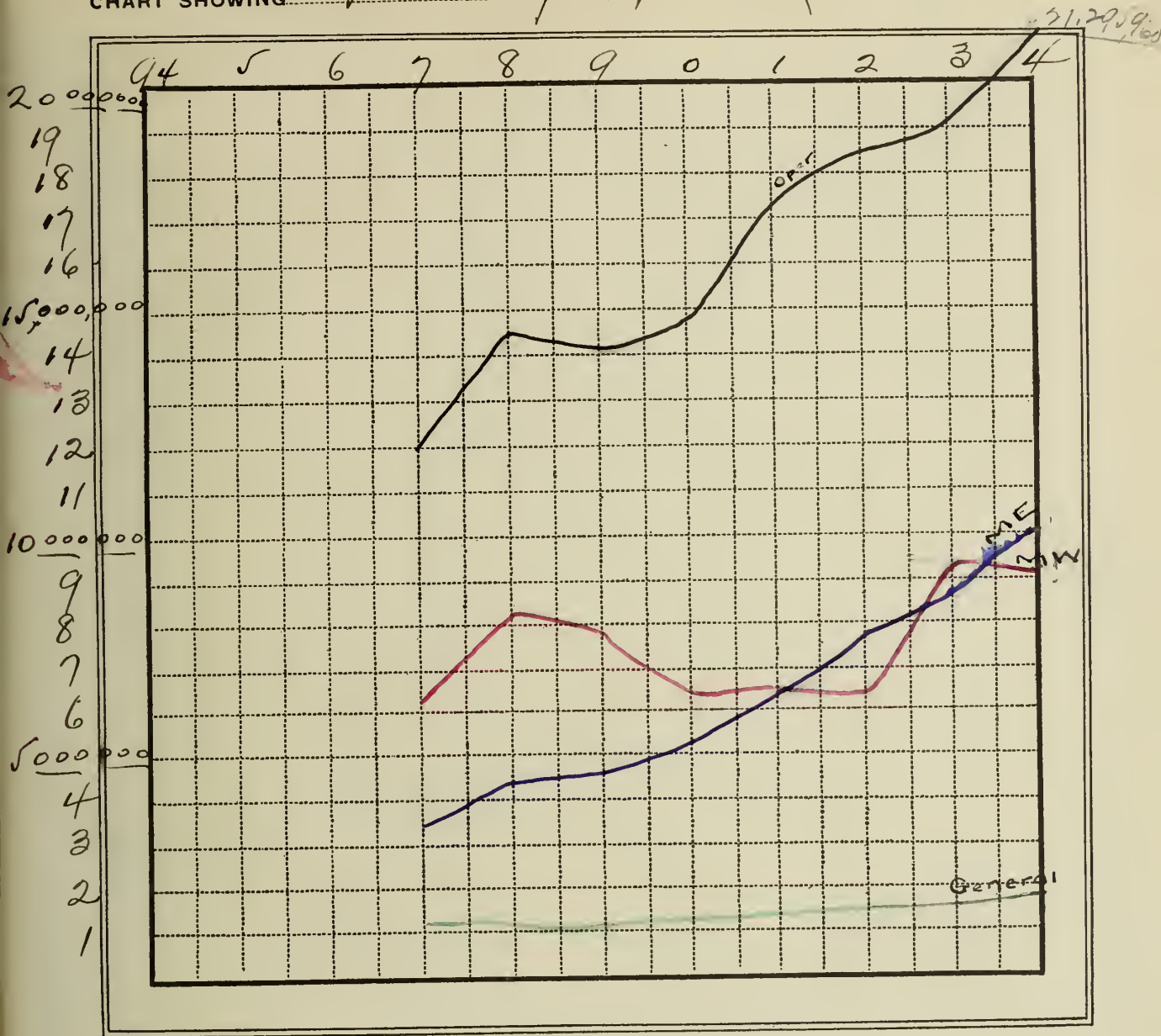
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Atchison Tapes and Santa Fe

CHART SHOWING *Operating Expenses*

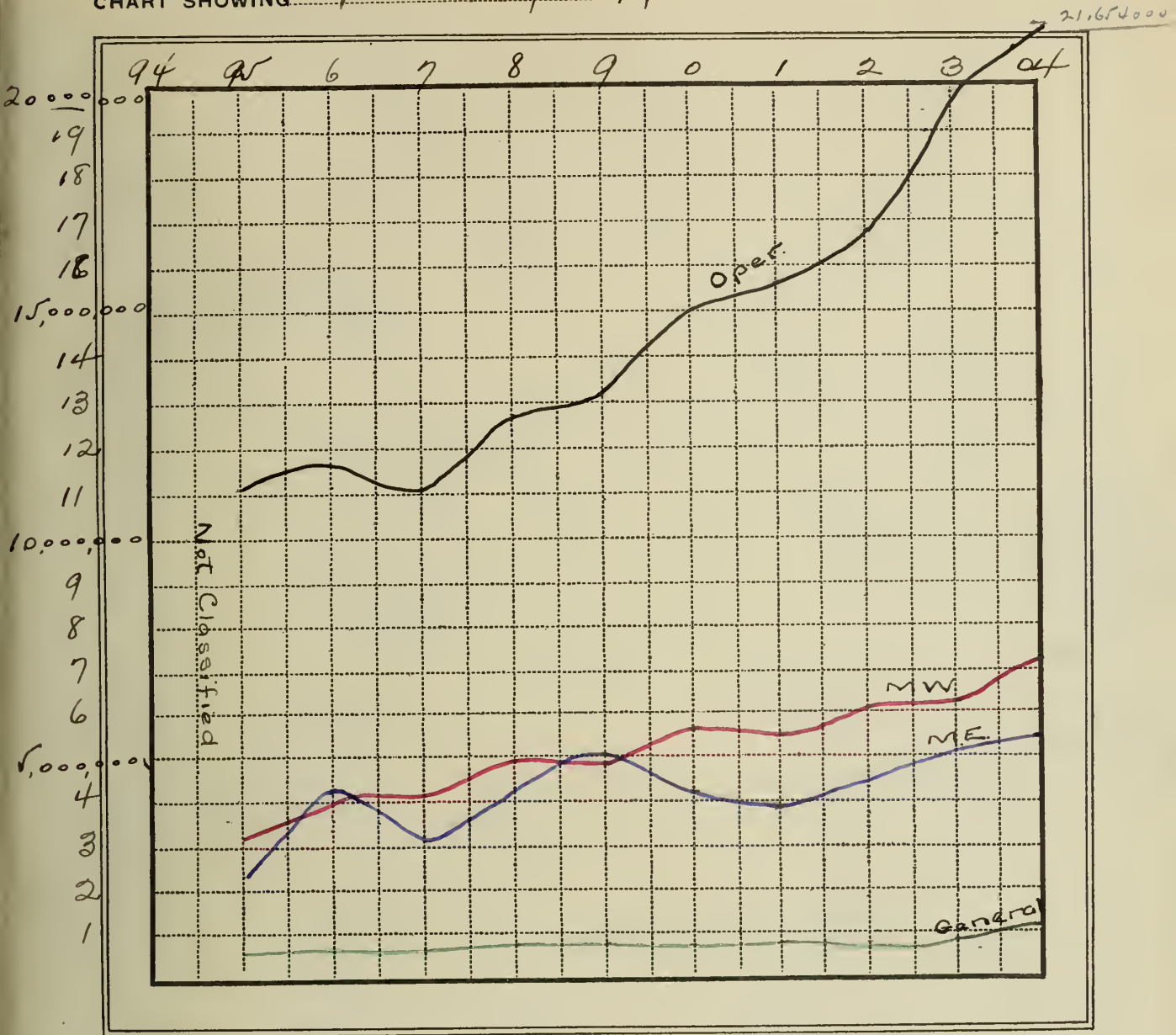


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Chicago and North Western

CHART SHOWING Operating Expenditures.



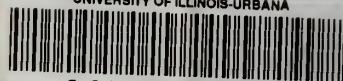
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